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TRANSFUSION OF DEFIBRINATED HUMAN BLOOD
IN A CASE OF TUBERCULAR PHTHISIS.

By M. W. WOOD, Asst. Surgeon, U. S. A.

(Read before the Chicago Society of Physicians and Surgeons.)

Although transfusion was known to the ancients, even before the commencement of the Christian era, reports of cases in which this operation has been successfully performed have not been so frequent as to render the subject a trite one, and the following account is submitted, as it may prove of interest to some member of the Society.

Private F— D—, Co. "K," 9th U. S. Infantry, age 27, occupation, previous to enlistment, tinsmith, and whose family history is free from deaths from consumption or allied causes, was admitted into the hospital at this post, Aug. 31st, 1875, as a case of anaemia, and until Nov. 1st the case was so regarded, and accordingly treated by remedies addressed to the hæmatosic function of the body.

At about the latter date, the case came under my charge, and as I suspected the deposit of tubercle, I

made frequent and very careful examinations to detect evidence of its presence, but with a negative result. This patient was also carefully examined at about the same time by two other physicians, neither of whom was able to discover any evidence of a tubercular deposit, although we were all sufficiently satisfied that, sooner or later, tuberculosis would terminate the history of the case. I had at this time no clinical thermometer, which would have undoubtedly strengthened our opinions as to the correctness of the diagnosis. About Nov. 15th, my thermometer arrived, and, as I had expected would be the case, an elevation of temperature, constant, and from 1° F. to 2.5° F., was observed.

About the middle of December, I was hurriedly summoned one evening to the first haemoptysis, which had, however, been preceded for twenty-four hours by bloody-streaked sputa, but without any marked fluctuation of temperature. From this time onward, despite the assiduous use of every means, therapeutic and hygienic, at my command, he continued to have, every few days, haemoptyses, varying in quantity from two to eight ounces. These were sometimes preceded by prodromic symptoms, but prophylactic measures seemed unavailing. He had, as his constant companion, a small quantity of finely powdered table salt, with which he was able to arrest the flow of blood in a very short time, and he soon lost all fear of an immediate fatal result. During a period of two weeks he took one fluid drachm of aromatic sulphuric acid daily, but during this period haemoptyses occurred as frequently and as profusely as before. Dilute phosphoric acid, tannic and gallic acids, and the tincture of the chloride of iron, successively thoroughly tried in full doses, were no more efficacious, and finally it was determined to distress the stomach no longer with astringents, reserving it for nutrition. Haemoptyses were now no more frequent than before, but these, with the very rapidly advancing, and now very evident tuberculosis, were fast drawing the curtain upon a scene of patient suffering.

He had taken to his bed at last, but little more than a shadow, too weak to walk or stand alone; his appetite had disappeared, and although he fully appreciated the importance of taking nutrition, barely two ounces of milk were taken daily, in addition to the cod-liver oil, of which he has taken about two gallons. He had for some time suffered from dyspnœa, and this now amounted to orthopnoea.

On February 5th, it seemed evident that he could hardly survive forty-eight hours longer, and I determined to give him the benefit of transfusion. Fully conscious of his condition, he readily consented to the operation as offering a hope; worse he could not well be, and live. A young, strong, healthy man having volunteered as donor, a sufficient quantity of blood was drawn, and with an ordinary hard rubber syringe, between three and four ounces were injected, and even this small quantity proved sufficient to overcome the "dead point" as Dalton has happily termed it.

The apparatus used, and the mode of procedure adopted were so simple that I cannot forbear entering into details concerning them. Upon a retort-stand or funnel-holder, and over a spirit-lamp, a small tin basin, partly filled with water, was supported; and in this, separated from its bottom by a small ring of pasteboard, was placed a wedgewood mortar which had been previously measured and graduated to indicate the quantity of blood drawn. The stem and attached scale of an ordinary thermometer were then placed in the bath so that at a glance the temperature might be read. The mortar was first heated to 105° F., and into this seven ounces of *venous* blood were drawn; after which the apparatus was suffered to cool to 100° F., at which temperature it was kept thereafter, during the operation. The blood was carefully defribinated by a wisp cut from a broom, and afterward constantly stirred, that its temperature might be uniform throughout.

The left median cephalic vein of the patient was

chosen, and exposed for about an inch of its course, by dividing with scissors a transverse fold of skin pinched up between the fingers. About the vein thus exposed, three ligatures were thrown.

As this operation has not, to my knowledge, previously been performed in this manner, I will append a rude diagram.



I will speak of these ligatures as Nos. 1, 2, and 3. No. 1, as will be seen, is toward the distal extremity of the vein, and intended solely to prevent loss of blood by the patient; No. 3, toward the proximal extremity, to guard against the introduction of air; No. 2, nearer 3 than 1, to embrace the contained nozzle of the syringe during the injection. A valvular opening was then made into the vein with scissors, as indicated. The syringe was now filled with blood, its point introduced into the vein nearly to No. 3, and enough of its contents forced out to deprive this portion of vein of any air which it might contain. No. 2 was then tightened about the nozzle, No. 3 loosened, and the syringe emptied. No. 3 was now tightened, No. 2 loosened, and the syringe withdrawn. This process was repeated until nearly four ounces of blood had been injected.

The condition of the patient may be inferred from the brief account of his case already given; suffice it to say, that at 12 M., just before the operation, his temperature was 102.6° F.; pulse, 105; respirations, 34; orthopneic and in great distress. At 1 P. M., after the operation, these were: temperature, 101.3° F.; pulse, 101; respirations, 27; and now he was breathing much easier; felt quite comfortable, and his lips, ears and nose had assumed a healthier hue. At 4.30 P. M., temperature, 104 F.; pulse, 111; respirations, 22, and he was much easier

than he had been before for some days. From that hour until the present he has continued steadily to improve, and the minute details are unnecessary. The last time that he was weighed prior to the operation (some time in January) he weighed 97 lbs. ; and at the date of writing this, Feb. 25, 1876, he weighed 111½ lbs. This tells the story much better than can words of mine.

The night sweats, which had resisted all measures for their relief, disappeared the third night after the transfusion, and there has been no further haemoptysis. The appetite has improved, and he now takes with relish, good nutritious food.

The dyspnoea is insignificant, and the destruction of lung tissue seems to have been arrested ; and while I am not sufficiently sanguine to expect his recovery, I think he will soon be able to return to his friends in the East. He gets up in the morning before breakfast time, walks about in the open air, and is looking forward to a complete recovery.

There are several points of interest in connection with this case, which have afforded me themes for thought. Among these, are :

1. The haemoptyses. I had never before noticed this symptom in such rapidly advancing cases, and had been led to believe that it did not often occur. One eminent writer, Dr. James E. Pollock, in a lecture on this subject, published in the *London Medical Times and Gazette* for July 25th, 1874, says : "Acute tuberculosis has no haemoptysis."

2. The occurrence of sudden, profuse haemoptysis upon the receipt of a letter containing unpleasant news ; excited, he burst a blood-vessel.

3. The fact that many of these haemoptyses, among them the first, occurred while the patient was lying quietly in bed, without any known exciting cause.

4. The occurrence of haemoptyses without any previous fluctuation of temperature, or other prodrome.

5. The complete cessation of these hæmoptyses since the transfusion is noteworthy, in view of the statements of Tabouré,* who has had considerable experience with this operation. He gives it as his opinion, that the substitution of defibrinated for normal blood sets up a sort of hæmophilia.

6. The yielding of the night sweats as a result of the improved nutrition following the transfusion, while medicines had previously failed.

7. The difference in the number of respirations per minute, before and after the operation, from 34 to 22.

8. The non-occurrence of troublesome symptoms after the operation. No phlebitis or other untoward sequel occurred to either patient or donor. I had been prepared to expect rigors, an aggravation of the dyspnoea, hæmaturia, or some other troublesome symptom, but instead, bodily comfort and peace of mind immediately took the place of great mental and physical distress. How much of this is traceable to the fact that human blood was used instead of that of some other species of animal, I am unable to say; but bad results have more generally followed transfusion when blood from another species of animal has been used. Although the urine was not examined chemically or microscopically, no apparent change occurred in this secretion subsequent to the operation.

9. The simplicity of the operation. Performed in this way, it requires no special, complicated apparatus, nothing but a pair of scissors, or a knife, and a syringe. And as the hypodermic syringe is always at hand, transfusion is an easy matter. I am indebted to Surgeon W. C. Spencer, of the Army, for the idea of the system of ligatures, but I believe this is the first application of the idea. In this connection I cannot refrain from transcribing an expression of Druitt's, which occurs in his work on Surgery: "It is consolatory, therefore, to know, that most of the successful cases of transfusion have been performed with common pewter or brass syringes."

* *London Medical Times and Gazette*, Sept. 5, 1874.

10. The small quantity of blood used. Before two ounces had been injected, the patient became easier and more comfortable, the dyspnœa had nearly disappeared, the number of respirations per minute perceptibly lessened, and as soon as he expressed a "sense of fullness in the head," I desisted. I have not now the literature of the subject at my command, but I can remember instances in which eight to twelve and even sixteen ounces are spoken of as necessary.

11. The force necessary to introduce the blood. This, while it would not surprise a demonstrator of anatomy who had been accustomed to the injection of cadavers, was much more than I had supposed would be required to introduce a fluid into a living vein of the size of the median cephalic.

12. The use of defibrinated venous blood. Professor Albani is credited with having said that he does not think that any fluid obtained by defibrillation is worthy the name of blood ;* and Gesellius, in his monograph, says defibrillation is not only useless but injurious, because small fibrinous clots and rouleaux of blood corpuscles are always abundantly present in blood which has been whipped and stirred to remove its fibrin, and there is, therefore, the danger of the production of embolisms by their means—and further, that defibrinated blood is to a certain extent dead, because its corpuscles have become exhausted in the production of the fibrin, and the transfused blood will be less and less beneficial the more perfectly the defibrinating process has been carried out.†

Despite the caution which has been often given to avoid using, as a donor, a person addicted to liquor, I used blood from a man, who, in his enthusiasm, had nearly tested his capacity for liquor just before the operation ; but the quality of the blood seems not to have been materially injured.

* *London Medical Times and Gazette*, Sept. 5, 1874.

† *London* " " " " " Dec. 19, 1874.

To Dr. C. V. Petteys, A. A. Surgeon, U. S. A., and Dr. J. L. Mills, Medical officer to the Spotted Tail Indian Agency, great credit is due for their assistance and counsel in this case.

Feb. 29, 1876. The patient weighed 114 pounds to-day, and is increasing in weight at the rate of three-quarters of a pound daily.

CAMP SHERIDAN, Neb., Feb. 29, 1876.

REPORT ON CERTAIN TOPICS CONNECTED WITH THE PROGRESS OF CHEMICAL INVESTIGATION.

By HENRY M. LYMAN, M.D.,

PROFESSOR OF CHEMISTRY IN RUSH MEDICAL COLLEGE, CHICAGO.

(Read before the Chicago Medical Society, April, 1876.)

No very brilliant discoveries of a nature to captivate the popular fancy, have rewarded the recent labors of chemists. Something, however, has been accomplished in the way of utilizing previous discoveries, as may be seen by a recent paper on the preparation of oxygen, by Dr. A. W. Hoffmann, translated and published in *Nature*, Feb. 10 and 24, 1876. All the methods, usually noticed in text-books, for the preparation of oxygen, are passed in review, and a large number are described. The easiest and cheapest method for the production of the gas was originated and perfected by a French chemist, M. Tessié du Motay, who has, since 1867, experimented continually with the object in view to produce oxygen so abundant and cheap that it may be used in the arts as freely as we now use ordinary coal gas.

He has succeeded in preparing it in almost any quantity at a cost of three francs, or about sixty cents, gold, per 1,000 feet. The method consists in passing air over caustic soda and manganese di-oxide at a dark red heat. ($4 \text{NaOH} + 2 \text{MnO}_2 + \text{O}_2 = 2 \text{Na}_2\text{MnO}_4 + 2 \text{H}_2\text{O}$). The

manganate of sodium, thus formed, under the influence of a dry current of overheated steam, disengages at the same temperature caustic soda, sesquioxide of manganese and free oxygen. ($2 \text{Na}_2\text{MnO}_4 + 2 \text{H}_2\text{O} = 4 \text{NaOH} + \text{Mn}_2\text{O}_3 + \text{O}_2$).

The principal use of oxygen, thus far, has been in connection with the metallurgy of platinum. It has been recommended as an auxiliary for the Bessemer process of making steel—using a blast of oxygen instead of common air; but the great difficulty of finding materials sufficiently refractory for the construction of the retorts and furnaces which would be needed, thus far hinders the adoption of such a method.

It is for illuminating purposes that the gas is now mostly employed. The oxyhydrogen lamp, employing zirconium-cones instead of chalk cylinders, yields a light sixteen and a half times as strong as the consumption of the same amount of coal-gas would afford. Various experiments for the illumination of streets and buildings by this method have recently been conducted in the European capitals. In Berlin it is said of the illumination of a railway station and its adjoining grounds, that “the effects caused by the little bluish flames are quite peculiar, and cannot be compared with any other light. The green of the trees seems more vivid, the colors of the dresses more brilliant, and above all, the faces of the people appear clearer—almost as distinctly as in full daylight.”

Thus far, however, the necessity of duplicating every gas pipe, and the fact that coal gas must still be furnished, as the hydrogen element of the burning gas, so increases the expense and danger of this method of illumination that there is no immediate prospect that its adoption will become at all general.

In this connection I may be allowed to present a few estimates concerning the cost of illuminating gas manufactured in Chicago. It is difficult to get at the figures which are necessary to complete accuracy in such a com-

putation, but sufficient data have in one way or another been made public to show that gas can be manufactured and sold for much less than is now charged for it, and still be made to yield a fair profit on the capital invested.

Cost of gas mains in Chicago, A. D. 1875 :

South Side.....	\$1,818,680
West Side.....	1,256,640
	<hr/>
	3,075,320

To this must be added the value of the gas works, for which no figures have been published, but for which, with land, gasholders, and a stock of coal for a year, a very generous estimate would be.....	2,000,000
Cost of plant — total	\$5,075,320

The cost of gas meters is not included, because they are virtually paid for by the gas consumers.

The total amount of gas manufactured during the year 1875, was.....	695,000,000 ft.
Deduct 10 per cent. for waste (a large estimate)	69,500,000
Leaves, for consumption.....	625,500,000 ft.
The value of this amount of gas, at \$2.50 per 1,000 feet	\$1,563,750

The cost of producing this gas was, for wages of employes.....	\$283,650
For price of coal, and expense of manufacture of 76,000 tons of coal.....	395,777

Total cost of 625,500,000 feet of gas.....	679,427
Total profit derived from sale of gas..... (0.17.8 per cent. on \$5,000,000.)	\$884,323

Besides this profit, every ton of coal should yield 170 lbs. of tar, estimated at 150 lbs. per ton. 76,000 tons 150 lbs. = 11,400,000 lbs. coal tar. Also, every ton of coal yields about 500 pounds of coke for sale = $76,000 \times 500 = 38,000,000$ pounds.

Coal tar is worth about $\frac{1}{2}$ cent. per pound—value of	
tar	\$57,000
Of coke there should be for sale about 1,140,000 bushels, worth at 8 cts. per bushel.....	91,200

So that from the sale of coke and tar alone the income is sufficient to pay the taxes, and to make up for the wear and tear of the apparatus and gas mains (estimated at 15 to 20 cents per ton of coal used, each year.)

As a matter of fact, the gas companies, at the present rate of consumption, are sure of an income of not less than twenty per cent. on their investment, as long as the price of gas is held at \$2.50 per 1,000 feet. It should be remembered, too, that there is no uncertainty or extra hazard about the investment. The manufacture is not liable to accident. There is no waste. Everything is saleable, and the exact amount of production can be calculated and anticipated with perfect accuracy. Money invested in the business is as safe as if it were put into Government bonds, and it is far more productive.

The recent improvements in the process of manufacture by which salicylic acid is obtained, are bringing that substance more largely into use. It differs from carbolic acid ($\text{HC}_6\text{H}_5\text{O}$) by the addition of the elements of carbonic anhydride ($\text{HC}_6\text{H}_5\text{O} + \text{CO}_2 = \text{HC}_7\text{H}_5\text{O}_3$).

Carbolic acid is obtained from coal tar, and as it may be converted into salicylic acid by anhydrous carbonic acid gas in the presence of an alkali metal, we have in this fact a new source of value for the coal tar which is produced in the distillation of illuminating gas.

Salicylic acid, when pure, is a white, crystallized substance, with a not disagreeable taste, and is soluble in three hundred parts of water, or in four parts of alcohol. It is not poisonous, for Prof. Traube prescribes it for acute rheumatism in doses of one gramme every hour until ten or fifteen grammes have been taken. Thus used it produces noises in the head, deafness, and antipyretic effects similar to quinine. It is, however, as a disinfectant, or antiseptic agent that it has been chiefly used.

It has been asserted that it is even more powerful than carbolic acid to destroy low organic forms and ferments. It is stated by Kolbe that its action is most decided upon those organic principles which, though formed in living tissues do not themselves constitute independent living forms. Such ferments are ptyalin, pepsin, emulsin, diastase, and similar unorganized causes of fermentative change. Upon the *organized* ferments, such as the yeast fungus and its class, salicylic acid seems to be more potent than carbolic acid. It also prevents putrefaction by destruction of those low forms of organized matter whose development in any given substance is the exciting cause of decomposition. This represents the current opinion regarding the substance. But in *Der Naturforscher*, for December, 1875, (quoted in *Nature*, Feb. 17, 1876, p. 317) is a paper by M. Fleck, of Dresden, "which appears to damp recent optimism in reference to salicylic acid as a means of disinfection. He finds that carbolic and salicylic acids may, under certain circumstances, even accelerate fermentation. Benzoic acid is more effective against fermentation, and cinnamic acid still better; but their small solubility in water is against their use. The antifermentative action of benzoic, carbolic and salicylic acids is dependent on the quantity of nitrogenous yeast-food; with increase of this the value of their action diminishes. The acids are not specific yeast poisons."

The recent use of nitrate of zinc, as a substitute for nitrate of silver, has been already noticed in the medical journals; and need not be mentioned further in this connection.

A French chemist, named Lecoq, has recently discovered a new metal resembling zinc. Delicately complimenting himself and his native country, he has named it Gallium.

The *American Journal of Science and Arts*, for January, 1876, contains an interesting paper by Prof. Draper, of New York, relative to the rotation of polarized light by solutions of quinine. He finds by experiment that

"the presence of sulphuric acid changes the rotation power of the alkaloid by 100°. Quinine used to be given in the form of sulphuric acid solution, and in the recently more popular form of pills or the like, its action is much less, and less certain; this difference being doubtless due to the change of molecular arrangement which is revealed in action of sulphate solutions of the alkaloid on light." (*Nature*, Feb. 17, 1876, p. 317.) Here, however, it may be questioned whether the professor has not too far left out of consideration the imperfect solubility and possible adulteration of many of the pills which are prescribed.

It is in the department of *physics* that are now being conducted those investigations which seem to promise most advantage to the progress of science. Mr. Crookes has recently performed a number of experiments which seem to prove that a ray of light falling upon a body *in vacuo* can communicate motion to a body so poised. The fact is disputed by some experimenters, who attribute the observed motion to the heat which may accompany light. However that may be, it is certainly a beautiful illustration of the power of *radiant energy* to produce motion in space.

Mr. J. Norman Lockyer is still pursuing his investigations with the spectroscope. He is gradually approaching the conclusion that the metallic elements represent forms of matter more simple than the *non-metallic* elements—in other words, that oxygen, chlorine, nitrogen, and elements of that class, are probably compound instead of simple substances.

H. C. Sorby, F.R.S., the well known president of the Royal Microscopical Society, has recently delivered a very interesting anniversary address on the *Relation between the limit of the powers of the microscope and the ultimate molecules of matter.** He shows that there is a "limit of visibility depending on the constitution of light." This "limit depends on the confusion in the image due to the

* *Nature*, Feb. 24, 1876, p. 332.

bright interference fringes overlapping the dark outlines of the object. This limit varies directly as the wave length of the light, and inversely as the sine of half the angle of the aperture of the object-glass when illuminated by means of a condenser of equal aperture." It is therefore necessary to believe that the normal limit of distinct visibility with the most perfect microscope is half of the wave-length of the light. If so, we must conclude that, even with the very best lenses, except under special conditions, light itself is of too coarse a nature to enable us to define objects less than $\frac{1}{80000}$ or $\frac{1}{100000}$ of an inch apart, according as a dry or an immersion lens is used. We must also conclude that *as far as this question is concerned*, our microscopes have already reached this limit."

Mr. Sorby then discusses the relation between this limit and the dimensions of the absolute atoms of matter as estimated by Stoney, Thomson, and Clerk Maxwell. A slight omission in his figures vitiates their absolute accuracy; but is not sufficient to affect the conclusions drawn from their study. He shows that "in the length of $\frac{1}{80000}$ of an inch (the smallest interval that could be distinctly seen with the microscope) there would be about 2,000 molecules of liquid water lying end to end, or about 520 of albumen. Hence, in order to see the ultimate constitution of organic bodies, it would be necessary to use a magnifying power of from 500 to 2,000 times greater than those we now possess. These, however, for reasons already given, would be of no use unless the waves of light were some $\frac{1}{100}$ part of the length they are, and our eyes and instruments correspondingly perfect. It will thus be seen that, even with our highest and best powers, we are about as far from seeing the ultimate structure of organic bodies as the naked eye is from seeing the smallest objects which our microscopes now reveal to us.

As an illustration, I have calculated that with our highest powers we are as far from seeing the ultimate

molecules of organic substances as we should be from seeing the contents of a newspaper with the naked eye at the distance of a third of a mile; the larger and smaller types corresponding to the larger and smaller molecules of the organic and inorganic constituents."

According to this computation a mass of organic matter, the size of a blood-globule, $\frac{1}{3000}$ of an inch in diameter, would contain about 20,000,000,000,000 molecules; and "a spherical particle one-tenth the diameter of the smallest speck that could be clearly defined with our best and highest powers, might nevertheless contain no less than one million structural molecules."

The relation of these facts to the communication of disease through the agency of minute particles of organized matter is very obvious. When we reflect upon the fact that organized bodies may be traced to the very limit of vision without any indication that they constitute the primordial representatives of living matter, we are constrained to believe that below the limits of our vision there is still a world of organized forms—germs, some of them, of forms which may or may not expand into visibility—and that among these invisible entities may very probably be classed certain poisonous organisms, germinating under the influence of heat and moisture in particular soils, and impregnating the atmosphere with what we call *malaria*, as well as other organisms which, multiplying within the human body and conveyed thence to other human bodies, may occasion the phenomena of the various infectious or contagious diseases. If this be so, the microscope can only help our search for the causes of communicable diseases in the universe of visible objects, but can throw no light whatever upon the existence and nature of the lowest organisms. Referring once more to Mr. Sorby's computations, it is evident that every blood-globule in the body might be invaded by a living mass of organized matter in which were assembled no less than one million molecules—an army of Germans devastating France; and yet, before the commencement

of its disintegration through the progress of the disease, the microscope could reveal no change whatever in the appearance of blood which had been thus entered. Nor need we be surprised at the virulence of such minute bodies. A drop of prussic acid may instantly kill a large animal. Why then should it seem strange that a germ which, though invisible, must be capable under favorable conditions of propagating its kind indefinitely, might so impregnate the tissues of an animal as to produce a dangerous if not fatal disease without any visible alteration of the histological elements of the tissues. We can only reach a knowledge of the existence and nature of such entities through the exercise of our reason upon the phenomena of disease, just as we arrive at a belief in the existence of interstellar ether through a consideration of the phenomena of light.

JÆGER'S OPERATION FOR CATARACT.

BY LYMAN WARE, M.D., CHICAGO.

(Read before the Chicago Society of Physicians and Surgeons.)

Prof. Jæger claims the following as some of the advantages of his operation over all others:

1. The possibility of making a complete linear section, thereby facilitating the extraction of the largest lens.
2. The possibility of having complete control over the eye, without fixation while making the section.
3. The *complete retention* of the aqueous humor while the section is being made, which is considered of the *greatest importance*.
4. The proportionally slight increase of the intraocular pressure during the operation.
5. The relatively easy task of removing the lens.

Prof. Jæger says that even among ophthalmologists the line of demarcation between the linear and flap section is not closely drawn. That can only properly be

considered a linear section whose entire length is at right angles to the same superficial layer, and which has a

FIG. 2.

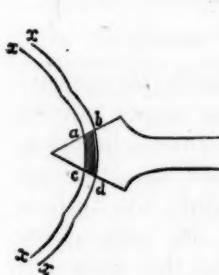
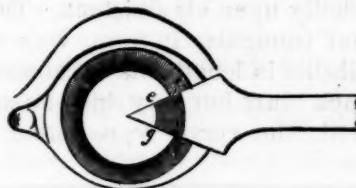


FIG. 1.



FIG. 3.

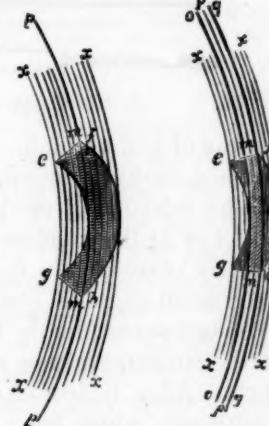


FIG. 4.



FIG. 5.

common axis. In Fig. 1, allow $x x$ to represent the several coats of the eye. Then the section $a b c d$ in its entire length is in the same direction to the superficial layer, and its breadth is the narrowest possible. In Fig. 2, the knife is not perpendicular to the eye but placed at an angle, and the section $e f g h$ is not at right angles to the same superficial surface, and has the greatest possible breadth, and forms consequently, a perfect flap. Figs. 3, 4, and 5, will show the same more clearly. In Fig 3, no portion of the section has the same common axis. Fig. 4 is inclined to a linear section, as that portion of the section $p p$ has the same common axis, and is at right angles to the same superficial surface. Fig. 5 is still more inclined, having the portions $o o$ $p p$ $q q$ in

its entire length in the same angle. Prof. Jæger operates in the sitting posture; is ambidextrous, dispenses altogether with anæsthetics and the eye speculum, depending wholly upon his assistant. The knife he uses is somewhat triangular in form, very similar to Beer's knife, $1\frac{1}{2}$ inches in length, its greatest breadth $\frac{1}{8}$ of an inch, its back blunt but very thin; its surface is cylindrically curved, the curve representing a circle with a

a. *Jæger's knife.*b. *Cystotome and depressor.*

radius of $\frac{1}{8}$ of an inch. He inserts the knife (the concave surface looking forward) in the outer, upper portion of the sclerotic $2\frac{1}{2}$ or 3 lines from the corneal junction, and 4 or $4\frac{1}{2}$ lines below the upper corneal line; the exit exactly corresponds to the entrance point; the knife is held at an angle of about 45 degrees to the bulb of the eye, and consequently the section lies for the most part in the cornea, and has an average length of about $\frac{2}{3}$ of an inch. After iridectomy he opens the capsule with his cystotome, which has a horizontal length of $1\frac{1}{2}$ inches, an arm which is at right angles to the shaft and which has a length or projection of $\frac{1}{8}$ of an inch, and is provided with a slight hook or projecting needle point. In introducing and removing the cystotome he is particularly careful in keeping it in contact with the posterior corneal surface. In removing the lens he presses lightly with his curette, whose curve corresponds to that of the eye, upon the upper corneal section, producing at the same time counter pressure by means of the index finger placed upon the lower section.

Being ambidextrous, his instruments must of course be duplicated, so as to correspond with the eye being operated upon.

Prof. Jæger's statistics are not yet sufficiently full and complete to judge impartially of his ingenious and long

studied operation, yet he is confident that its many excellencies will recommend it favorably to the profession.

ADENIA—WITH REPORT OF CASES.

BY N. A. DRAKE, M.D., OSSIAN, IOWA.

We have but very little literature on the subject of this disease. Rousseau devotes a lecture of thirty-one pages to it. He it was who gave it the name—Adenia. It is a disease characterized by progressive hypertrophy of the lymphatic glands. Rousseau claims no priority in describing the disorder, but gives due credit to Hodgkin, of England, who described it as far back as 1832; and to-day it is known as Hodgkin's disease. The Royal College of Physicians, however, do not recognize it. Yet Aitken gives two pages in his work to its description, and regrets that he, among others, has aided in confounding it with lardaceous diseases.

Virchow describes the disease as lympho-sarcoma in his work on Tumors, which first appeared in 1865.

Wunderlich, I believe, adheres to the name of Hodgkin's disease.

Rousseau's lectures were not delivered on this subject until two years after Virchow's, and hence he was able to give the result of more study.

Little can be found, written this side of the Atlantic, on this disease.

Dr. W. H. Triplett read an essay on the subject before the Medical Society of the District of Columbia in 1874. In this he adheres to the name of Hodgkin's disease.

In July, 1869, I was called to see a Norwegian woman, about thirty years of age, who had lately arrived in this country. On first sight she presented a peculiar appearance. The cervical and submaxillary glands were so enlarged as to produce a very singular deformity, while she had a peculiar cachexia. Her breathing was

labored, she had a dry, hacking cough, and complained of great constriction in her chest. The axillary glands were as greatly enlarged as those in the cervical and submaxillary regions. There was no tendency to suppuration in any of the tumors; they were not inflamed at all. I could manipulate them freely with no complaint from the patient. The glands in the inguinal region were not as much enlarged. There was considerable anasarca. On auscultation of the chest, I could detect nothing but exaggerated normal sounds.

I gleaned from her that she had first noticed these tumors about one year previous, and that they had been gradually enlarging. Her appetite was good, but she was considerably emaciated. The liver and spleen were not perceptibly enlarged.

She died the month following.

I now believe this to have been a typical case of adenia. I then contented myself with pronouncing it a case of scrofula. I possessed neither the book of Rousseau nor Aitken at the time.

In May, 1874, L. F., an American, something over thirty years of age, at that time a "runner" for a Chicago grocery house, consulted me for violent nocturnal pain in his abdomen. He said it had been troubling him occasionally for two or three months, and usually he obtained relief by hot fomentations. He looked care-worn, as one does who has lost sleep and suffered pain. He was still traveling, and desired me to attend him so that he would not be obliged to suspend business. I gave him a casual examination, and thinking his trouble originated from more or less indigestion and irritability of bowels, I prescribed a laxative, to be followed by an anodyne; and as he was going to remain at home a few days, requested him to call and see me again before he went away. He did so, and reported himself considerably relieved. He went away on a trip but returned in a short time as bad as ever, and I then advised him to remain at home for awhile.

About this time he called my attention to some bunches in his neck, and said he had some under his arms and in his groins. Upon closer examination I found almost all of his superficial lymphatic glands slightly enlarged and none of them inflamed. This at once called to my mind the case just related.

Remembering that I had read something in Troussseau that seemed to describe his case, I turned to Adenia and was at once convinced that I had this disease with which to contend.

Having business that called him to Chicago, I advised him to consult Prof. Freer, not having given him yet an unfavorable prognosis.

He returned from Chicago in a week and told me that by the advice of a friend he had consulted Dr. Ludlam, a homœopathist. He said Dr. L. told him his difficulty was irritability of the bowels.

In about a month he returned and asked me to treat him. I then told him that his case was hopeless; that his disease would eventually prove fatal. The disease was steadily advancing. The cervical and submaxillary glands were now noticeably enlarged, as were nearly all his superficial lymphatic glands; and I accounted for the nocturnal pain in his bowels, which continued, by the enlarged glands pressing on the nerve centers.

He was dissatisfied with my prognosis, and knowing of his confidence in Dr. Bulis of Decorah, I advised that he consult him.

Dr. Bulis confirmed my diagnosis, told him that medicine would be of no use, and advised him to go to some mineral spring.

He went back again to homœopathy, then to the most abject quackery.

For a time he looked better. He had now given up traveling, and considering himself improved, he opened a grocery store in our town.

The disease made steady progress, and I learned he was kept up on stimulants and tonics.

When cold weather came he grew rapidly worse, and then went to Hot Springs, Ark. ; returning, towards the spring of 1875, much worse.

On April 25th he sent for me to prescribe for him. He was very much emaciated ; had marked cachexia ; the pulse was somewhat accelerated ; respiration was difficult except when quiet ; all the lymphatic glands were very large ; there was extensive anasarca ; the urine was scanty ; the appetite very good. He was suffering no pain. I could do him no good.

He died May 16th, about one year from the time he first consulted me.

The glands in this case were not as large as in my first case. There was not much dropsy in the first case, while this was a very prominent symptom in the second, especially towards the last. The spleen was not enlarged in either case.

Trousseau reports eleven cases, and enlarged spleen occurred only in three, hence he infers that the spleen is not necessarily involved.

In both of my cases glandular enlargement was first noticed in the cervical region, and the affection appeared to travel successively downward.

In case of L. F. the first complaint was of nocturnal pain in the bowels. Neither Trousseau nor any other author I can find speaks of a parallel case. I think the pain was caused by the pressure of the enlarged glands on the nerves, especially when in the recumbent posture. I could distinctly feel these glands through the abdominal walls.

All cases of this disease, that I can find reported, have ended fatally. The duration of the disease is from a year to a year and a half.

VICARIOUS HÆMOPTYSIS.

By J. S. McCORD, M.D., NEW WINDSOR, ILL.

(Read before the Military Tract Medical Society, at Galesburg, Ill., Jan. 11, 1876.)

I have to report a case of vicarious haemoptysis, not using the term *vicarious*, perhaps, in its most commonly accepted sense—that is, one organ performing a function which properly belongs to another—but arguing that in this case the lungs take upon themselves the labor of a discharge which, in itself, was primarily morbid, viz a chronic abscess of cellulitis.

Mrs. N., aged forty, during a space of eighteen years, with the exception of three periods of pregnancy and nursing of usual duration, had almost every menstrual period followed by the formation of an abscess in the left ileo-uterine space. I think it is about a year and a half since I was called to see the patient, then suffering from one of those recurring attacks, somewhat more severe than previous ones, although she described them as all being “perfectly awful” until after occurrence of discharge, a period ranging from a few hours to three or four days. After thoroughly satisfying myself as to the nature of the case, I further verified my diagnosis by a physical examination, finding a large fluctuating tumor bulging into the vagina from the left side. I proposed to evacuate the pus. But this was objected to by the patient and her husband, on the ground that for eighteen years it had “broken itself,” and when I argued the possibility of its discharge into the peritoneal cavity, the rectum or bladder, and so bringing about serious trouble, I was further assured that it had not only “broken,” but “broken in the right place.” In due time the pus was discharged by an ulcerative process and the woman recovered as usual.

A few days later the patient came to my office desiring to know if anything could be done to prevent the constant return of her trouble. I advised a course of local

treatment, with some constitutional remedies. But this advice, with something of her old spirit, she positively refused to accept. I then ordered the external application of tr. iod. over the seat of the abscess, as often as could be conveniently borne, together with potassic iodide and strychnia, thrice daily, internally.

I saw her from time to time, and ordered the treatment continued. To my great surprise, and at first to my delight, after a few months the abscess formation became less and less frequent, and at this date has not occurred for a period of nine months, although menstruation is still, as it has been, regular. The only trace of the abscess remaining, is a slight tenderness in the left iliac region. Now comes the point of interest in the case. Almost immediately upon the suppression of the abscess there commenced to occur the vicarious discharge of blood from the lungs in connection with or immediately following each menstrual flow. And to be strictly truthful, I should be forced to confess to my patient that I had, by interfering, actually induced a discharge from the wrong place.

CINCHONIDIA SULPHATE.

By E. H. PURDUM, M.D., HERMON, ILL.

(Read before the Military Tract Medical Society, at Galesburg, Ill., Jan. 11, 1876.)

In the early part of last year (1875) my attention was called to cinchonidia sulphate, and since that time, I have used it quite extensively, especially in intermittent and remittent fevers, and with results equal, so far as I could see, to those obtained by the use of sulphate of quinine; and with this advantage: my patients make no complaint about the disagreeable noises in the head, which accompany the use of quinine in the large majority of cases, though they generally supposed they were taking the latter drug. The dose I aimed to have corres-

pond with those of the quinine, when given under similar conditions.

The irritation of the stomach does not exceed that of any other of the alkaloids.

In illustration of its virtues I subjoin a few cases, or rather a synopsis of them:

CASE I. — Was called, Aug. 6th, 1875, to see G. L., male, aged 18. Has had general good health until within the last few days. On the 5th day preceding my visit, he had some slight chilliness alternating with hot flashes ; feels sore all over ; has no appetite ; bowels have been constipated for several days; tongue enlarged and coated heavily ; pain in the head, and slight tenderness over the region of the liver ; and there is some fever.

The residence of this patient is on the northwest side of Cedar creek, in the bottom, and not over eighty rods from it, surrounded on three sides by high hills, and with the prevailing winds from the south—a good location for malarial fever certainly. I gave him a purgative of comp. cathartic pills. I also ordered 4½ grains of cinchonidia sulphate and two grains each of pulv. Dover and pulv. Zingiber, every four hours.

Aug. 8th.—The patient is much better ; has not had any symptoms of chill or fever. Continued treatment for two days more.

On the 17th of August the young man spoken of above, came to my office to get medicine for five others of his brothers and sisters, being entirely well himself.

The five sick children ranged in age from eight to sixteen, and all were having intermittent fever. I prescribed cinchonidia sulphate, pulv. Dover and Zingiber, in four of these cases. I will simply state that the result was all that could have been expected under any method of treatment, and by afterward following this treatment with an antiperiodic mixture, there was no return of the disease in any of these cases.

CASE VI. — July 3rd, was called to see W. P., aged 55 ;

farmer. Found him with a fever, which was very high ; this had been preceded by severe chill ; tongue was very heavily coated, of dark brownish color ; bowels constipated ; pulse strong and quick ; intense pain in the head, accompanied by considerable stupor. I administered a full cathartic, and gave five grains of cinchonidia sulphate and two grains each of pulv. Dover and pulv. Zingiber, every three hours, commencing when the fever subsided. This treatment was continued over the 4th.

July 5th.—Has not had any chill or fever, and otherwise is better. Treatment continued for two days, and case dismissed.

On Aug. 6th, W. P. had another chill, followed by fever ; being about one month from his first attack. It will be well to give here a few of the circumstances surrounding this case. He was living in a very malarious locality, viz.: on the north side of Cedar creek, and had been laying drain tile for the purpose of draining a slough and a pond of standing water, which were on his farm—circumstances and conditions peculiarly liable to produce malarial disease.

At the same time (viz., August 6th,) that Mr. P. had his second attack, there were three of his children taken ill ; the oldest, aged 16 years, with typho-malarial fever ; the other two, aged 8 and 12 years, were cases of well marked bilious remittent fever, and were treated with cinchonidia sulphate, and their recovery was satisfactory, and not followed by any relapse.

These cases are designedly selected from localities very favorably situated to develop malarial fever, and the result of their treatment shows conclusively that the remedy has a very beneficial effect.

CASE IX.—Was called Oct. 3rd to see W. J., aged about 38 ; farmer and stock raiser ; living on the south side of Spoon river, and not over eighty rods from the stream. Has not been feeling well for some time, but still able to attend to his farm and stock ; two days ago

exerted himself very much in trying to drive some cattle, and on the 2nd he had a chill; has been feverish ever since, though the cool air would make him feel chilly whenever he came in contact with it. His bowels were torpid and he had no appetite; he therefore took a dose of pills, which acted pretty freely on his bowels also, producing a free emesis. He has not rested well through the night, and this morning (3rd) he is nervous and restless, being very easily disturbed; there is slight headache; pulse weak and small. The tongue is coated a dark brown in the centre, and the edges are very red; skin dry. Diagnosis: typho-malarial fever. I gave him five grains of cinchonidia sulphate and two grains each of pulv. Dover and pulv. Zingiber, every four hours. In addition, I left bromide of potassium to be administered as required, to allay nervousness and to promote sleep.

Oct. 4th.—Found him quieter. Continued the treatment. On the 5th he was much improved. There has not been any return of the chill, and the fever is subsiding.

Oct. 6th.—Continued treatment, as he was still satisfactorily progressing.

This treatment was continued six days longer, with an occasional cathartic, the patient making steady improvement.

After this time he was put on a mild tonic, which was kept up for an indefinite time.

In all those innumerable ills, such as slight neuralgias, rheumatism, etc., for which we are called to prescribe daily, I almost invariably use this remedy where I formerly used the quinine, and with favorable results.

A CASE OF VESICO-VAGINAL FISTULA AND LACERATION OF ANTERIOR PERINEUM,

THE DIRECT RESULT OF THE MALADROIT USE OF FORCEPS.

BY A. B. NEWKIRK, M.D., HYDE PARK, ILL.

Mrs. Maria H. was a native of England, 35 years of age; five feet eight inches in height; weight, 180 lbs.; mother of four children, and of robust health up to the time of her last accouchement, July 27th, 1875.

Mrs. H.'s first three children were born with easy natural labors, the first child weighing 12 pounds, and the second and third 10 pounds each at birth, and the last child, with an unusually small round head, though not weighed, was supposed to weigh between 6 and 7 pounds.

Mrs. H.'s last labor commenced about four o'clock in the morning and continued with slight increase in the force and frequency of the pains until ten o'clock, when Dr. J. (homœopathist), who having been called was in attendance, expressed his unwillingness to wait longer for more forcible pains, proceeded to deliver with forceps, and had great difficulty in applying them, "owing to a very rigid condition of the uterus," and in their application and use caused great pain and suffering to the patient, the forceps slipping seven or eight times. The Dr. continued the use of the forceps for about four hours, excepting that when he would become fatigued from protracted effort, he would rest for a few minutes at a time.

Delivery was finally effected about two o'clock P. M., of a male child with scalp lacerated, much bruised and tumefied on the antero-superior temporal region, where there is now to be seen an indelible cicatrix, and the left eye and cheek bruised and swollen and the latter lacerated. The delivery was followed by alarming haemorrhage.

On the day following delivery there was a great deal of soreness, pain and tumefaction of the genitals, and the urine no longer flowed through the urethra, but

passed through the vagina, and continued to do so up to the time of the death of the patient. The inflammatory action set up in the vagina and pelvic viscera (evidently by the maladroit use of the forceps) continued for about four months, with resultant constitutional disturbance of varying intensity, until December 3rd, when there was a discharge at one time of over half a gallon, by measure, of very offensive muco-purulent matter, after which the sufferings of the patient were much less. Mrs. H. continued during these four months under the care and treatment of Dr. J., who, during this time contributed greatly to the discomfort and suffering of the patient by the caustic and other local applications made by him to relieve the immediate effects of the first injury, until she became greatly anaemic after her long suffering. Then Dr. J., discouraged, perhaps, by the results of his blunders, informed the husband of the suffering woman, Mr. John H., an intelligent and accomplished florist and gardener, that his wife was laboring under cancer of the womb; that he could do nothing more for her, except with a view to mitigate her suffering, and that she would linger for three years with the cancer.

Mr. H. was much grieved when informed that his wife had cancer of the womb, as he had lost a former wife in consequence of this affection. Although a poor man, he was anxious to have the sufferings of his wife, as far as possible, mitigated if not relieved, and hence sought and obtained advice and treatment by several physicians without benefit.

On Jan. 21st, last, I was called to see the patient, and obtained from her, her husband, and the nurse who was present at the time of her accouchement and for some time thereafter, the above narrated history of this case, substantially. I found Mrs. H. an object of pity and compassion; her cadaverous face and anaemic condition impressed me with the belief that she might not survive the night without the liberal use of stimulants and cor-

dials. She was certainly too weak to be removed from where she lay upon a lounge remote from a suitable light in order to undergo an examination. I therefore directed that she be given freely of stimulants and beef tea, and took my leave, promising to return the following morning, and, if the condition of the patient then would justify it, I would complete the examination of the case.

The following morning I found her more comfortable and somewhat refreshed by the stimulants and beef tea ordered the previous day, and proceeded to carefully examine the parts, after placing her upon a table in front of a good light, and rinsing the vagina well with a solution of carbolic acid.

I found as lesions, vesico-vaginal fistula two inches in length antero-posteriorly and one inch in its greatest transverse diameter in the bas-fond of the bladder; its edges were smooth and somewhat thickened. The internal surface of the bladder was quite corrugated in appearance, and its cavity of not more than one-half the normal size.

I could see, while looking through the speculum and fistulous opening, the urine dropping at regular intervals from the ureters into the bladder.

The canal of the urethra was closed by viscid mucus (or adhesions), so as to require considerable force to introduce a catheter.

I could not see the os uteri, but it, with that portion of the uterus presented to view, felt firm and immovable, apparently in consequence of adhesions of its posterior face to contiguous tissues.

There were several ulcerated surfaces to be seen upon the mucous membrane lining the vagina, one on its posterior face fully an inch in its greatest diameter, and extending in depth nearly or quite through it.

The anterior perineum and about two inches in length of the inferior recto-vaginal septum, with its mucous covering, were lacerated, leaving the rectum for that distance exposed anteriorly.

The lacerated and ulcerated surfaces were discharging a muco-purulent matter, freely.

The extent of the consequent drain upon the system may be approximated when we consider that, during the examination, lasting about thirty minutes, there was collected upon a napkin placed under the hips of the patient, about a fluid ounce, notwithstanding the precaution taken, before commencing the examination, of rinsing well the vagina and bladder with a solution of carbolic acid.

I inquired of the patient particularly, *if she had had any lesions of the bladder or perineum before her last confinement, and, at what time she first noticed any; also, when she first noticed the urine pass through the vagina;* to which she replied, that "she was perfectly healthy and had no trouble of the kind named before her last babe was born; that *the day after that*, she noticed that her water did not pass out the natural way, but dribbled away from her continually through the 'birth place'; that the 'birth place' was so inflamed and painful to her for some time that she could not bear to have it touched; and when the swelling somewhat subsided, she found the lower part of the outlet all torn away; that the doctor nearly killed her with his instruments when she was confined, for he hurt her so badly when he was fixing them and when they slipped, as they did seven or eight times."

After completing the examination of the case and satisfying myself as to the condition of the patient, I explained to Mrs. H. and her husband, the nature of the case, (the first intimation of the kind they had received from any one), probable cause, and results to be reasonably expected from treatment; that vesico-vaginal fistula could be produced in three ways: first, by idiopathic disease of the bladder, or agents acting mechanically upon its internal surface, resulting in lesions, first of its inferior walls, and secondly of the superior walls of the vagina; second, that a child's head, relatively large, im-

pacted in the superior strait of the pelvis, and so pressing upon the neck of the bladder sufficiently long, would result in inflammation and sloughing of its walls and that of the vagina; third, by direct mechanical means operating from within the vagina, first upon its superior walls, and secondly upon the inferior wall of the neck or bas-fond of the bladder.

In carefully examining the history of this case, as presented above, we find no evidence of the first named cause having existed *prior* to the existence of the fistulous opening.

When we consider the fact of the comparatively large and well developed pelvis of the mother, and the fact of the child's head being round, and small for a child weighing less than seven pounds, and the further fact that there is no evidence going to show that there was any retention of the head in contact with the bladder by impaction, and the additional fact, that, if produced by long pressure of the head upon the bladder the resulting fistulous opening would not have been produced so soon as it was in this case by several days, we are justified in the conclusion that in this case the fistulous opening cannot be the result of the second cause named.

We are, therefore, left with the third cause named to account for the lesion of vesico-vaginal fistula, and by the same course of reasoning we are forced to conclude that the lesions of the antero-perineum in this case were produced by the same cause, to wit, the maladroit use of forceps, perhaps when they slipped, as the patient states they did seven or eight times, producing great pain and suffering at the time, their edge coming in contact with the tense perineum with considerable force while traction was being made, or it may have been made in a line with the axis of the superior strait of the pelvis.

I suggested to Mr. H. the advisability of calling other members of the profession to see the case, as it was one of considerable interest, to which he readily assented, and A. H. Mann, M.D., of South Chicago,

J. E. Morrison, M.D., of Hyde Park, J. Ramsay Flood, M.D., Assistant Physician to the Woman's Hospital of the State of Illinois, and A. Reeves Jackson, M.D., Surgeon-in-Chief of the same institution, were called in consultation and made a careful examination of the case, and fully confirmed the views above expressed by myself as to the nature and probable cause of the existing lesions, and the results of treatment to be reasonably expected in the case.

I continued the treatment of Mrs. H. up to the time of her death, with results somewhat variable during this period.

For the first two months, a generally tonic and hygienic treatment, varied from time to time as circumstances required, was upon the whole found to be beneficial; the patient being able to sit up on an easy chair for a while each day of the last week of the time.

On March 24th, the condition of the patient became less favorable by reason of the supervention of enteritis, which continued, notwithstanding the remedies used to avert it, until April 10th, when she died.

I made a post-mortem examination of Mrs. H. on the following morning, with the assistance of Charles Adams, M.D., and J. E. Morrison, M.D., in the presence of Mr. H. and Dr. J. We found the small intestines extensively inflamed, and the transverse portion of the duodenum prominently so. The mesenteric glands and glands of Peyer, with the right kidney, were also inflamed. We found the uterus by the lower two-thirds of its posterior face firmly attached by adhesions to contiguous tissues, and that portion of its body below its peritoneal covering soft and friable, so that in the effort to separate the above named adhesions with the fingers, the superior third and anterior face of the body of the womb readily separated from the adherent portions.

We found the bladder of about half the normal size, with fistulous opening in its base of one by two inches in diameter.

UPON SOME POINTS IN THE ETIOLOGY OF
HEREDITARY SYPHILIS.

By F. R. STURGIS, M.D.,

Clinical Lecturer on Venereal Diseases in the University of the City of New York.*

MR. PRESIDENT AND GENTLEMEN OF THE ASSOCIATION:

In this evening's paper I beg to present, more to elicit a discussion of your views than to offer any original or startling theory, a criticism on the opinion which still obtains among a large part of the medical profession, that syphilis is transmissible to the ovum in utero by the semen of the male parent, without the mother becoming infected either by the husband or by the ovum.

This question has been for a long time a moot point among medical men, and indeed seems as far from settlement now, as it was when enunciated by Cullerier in 1854 before the Société de Chirurgie de Paris, if we regard the papers and monographs written by the upholders of both sides of the argument—those for and those against.

In 1871 and 1873, I wrote two papers criticising and weighing the evidence offered by both sides, and showing why the testimony given in favor of this mode of transmission was defective and unworthy of acceptance. Let me say this at the outset, that those who accept this paternal transmission theory, and seek to prove its truth by cases, enter the race heavily weighted as regards their antagonists; all these latter have to prove is the good health of the mother and child, while the former have to prove: first, the undoubted existence of syphilis in the father and child; second, the non-existence of the disease in the mother, not only in the present but in the past and future; and third, to explain sundry anomalies and contradictions which the other side are not troubled with. Little wonder then, gentlemen, if the absolute proof be difficult to give.

* Read before the Medical Journal Association of the City of New York, May 26, 1876.

In the first place let us examine the question theoretically. Why is it unlikely that syphilis should exempt the mother and attack only the ovum? To do this properly we must explain what syphilis is and how it acts, at least as regards contagion. We believe it to be a disease which, during some of its stages, notably the earlier ones, is eminently contagious, so much so, that, given the proper conditions, it will be propagated to others who are free from the disease, without any respect of person, sex or age. The virus of syphilis has not yet been isolated, perhaps never will be, but by experiment we are in a position to say that similar symptoms will be induced in a non-syphilitic person by the mere fact of bringing in contact with the absorbents the secretions from the chancre (initial lesion), from mucous patches and the corpuscles of the blood during the first year, at least. The serum does not seem endowed with this property. The transmission by the secretions of other lesions is not yet proven; and infection by the natural excretions of the body, viz.: the tears, sweat, saliva, milk, etc., with but one exception, the semen, have been excluded as impossible. So that in order to accept this theory we must allow that a healthy mother can without danger to herself retain, and perhaps bring to full term, a diseased foetus, and this child, the moment it comes into the world, becomes the centre of contagion for all non-syphilitic persons who may be unfortunate enough to get the blood or the secretions from the mucous patches of the child in contact with their absorbents, excepting the mother, who, wonderful to relate, escapes all contagion although she suckles the child herself—a fact noted by Mr. Abraham Colles, of Dublin, as early as 1837.

The first point, viz., why the mother should escape the disease while the foetus is yet in utero, is believed to be explained in this manner, and I quote from the latest writer on the subject, M. Kassowitz, of Vienna, a firm believer in this theory, and whose experience in the

repeated immunity of the mother has been so fortunate that, were it borne out by general experience, it would almost settle the point in dispute. He writes: "There is every probability from the facts just detailed, for believing that the syphilitic poison is not transmitted from the mother to the foetus, provided that at the time of conception the mother was not syphilitic, nor does the child, rendered syphilitic by the father's semen, transmit the disease to the healthy mother, and moreover this virus does not pass through the walls of the vessels between the circulatory apparatus of the mother and foetus." Thus we see the endosmosis and exosmosis of the virus is denied, and if this theory be the correct one, how can we explain the absorption of the virus in acquired disease? If I understand it correctly, the poison is absorbed from the point of entrance into the mass of the blood. How can this be effected but by endosmose; by the blood carried elsewhere, and deposited in the tissues by exosmose; is it not? There is, then, continued endosmosis and exosmosis going on, else the virus would remain encysted and could work no mischief. Then, again, look at it from the hereditary point of view: syphilitic women give birth to syphilitic babies, where, so far as we know, the husband is free from the disease; if the virus did not transude through the walls of the maternal blood-vessels to poison the foetal blood, where did the child get its disease? Let me give a case briefly: A woman married a man who contracted syphilis, by him had a child which showed unquestioned syphilis congenita; she herself meanwhile remained healthy, *i. e.*, showed no signs of syphilis. The husband died; she, still being free from syphilitic disease, married a man who was perfectly healthy, and four years after marriage has a syphilitic child. (VIDAL, *Gaz. d. Hop.*, 1841.)

Now how to explain it. The simplest and probably most correct answer would seem to be, the woman's immunity from syphilis was only apparent, she was probably diseased. It may be urged that the second hus-

band was diseased; the history, however, states explicitly that both were free from syphilis, and there is no good reason for accusing him more than her. If we admit the freedom from disease of these two persons, we are driven to admit that healthy, *i. e.*, non-syphilitic, persons can procreate a syphilitic child, a proposition so manifestly absurd as to need no comment.

In former papers, I have given reasons why physicians are likely to be deceived in investigating this question, partly from natural causes dependent upon the disease, and partly from the ignorance and deceit of the patients. It is unnecessary, therefore, to revert to them here, and in arguing against this view I shall confine myself to a consideration of the cases of M. Kassowitz, who is the latest exponent of the doctrine. He takes the records of the K. K. Findelhaus, in Vienna, from 1854 to 1868 (for 15 years,) and states that out of 400 cases of syphilitic children, in 122 the mothers were syphilitic, in 112 the condition of the mother was unknown (*mutter unbekannt*) and in 166 the mother was healthy. I have been unable to get at the sources of his facts to verify his statements, but allow me to point out one or two things in the table which strike me as curious, to say the least. In the first place, what is meant by saying that the condition of the mother is unknown (*mutter unbekannt*)? she must have been either ill or well, *i. e.*, showing signs of disease or free from them; if the former, the mother should be ranged under the head of "mother syphilitic;" if the latter, under the head of "mother healthy," or rather, what would be probably more correct, the healthy mothers should be put under the head of "*unbekannt*."

Again, as the record stands, it is decidedly opposed to the experience of other observers. Oewre, of Christiania, gives the results of 100 syphilitic children watched by him in the University Hospital at Christiania, and they stand: Mothers diseased, 93; in only 4 cases were symptoms absent, although in even these cases, M. Oewre says there was room for question. (OEWRE,

Aftryek ur Nordiskt Medicinskt Arkiv. Band V, No. 19.)

O.'s cases were one-quarter the number of Kassowitz'. Suppose we make them equal for purposes of comparison :

	No. of Syphilitic Children.	Mothers Syphilitic.	Mothers Unknown.	Mothers Sound.
KASSOWITZ.....	400	122	112	166
OEWRE.....	400	384	16

A very great difference, as you see. M. Kassowitz in his private practice relates 119 cases; of these, the connection between the disease and hereditary transmission was doubtful in 43, exclude them, and we have 76 cases, in 43 of which the mothers were entirely free from syphilis; in *twenty-three cases both parents*, and in ten the mother only was affected with syphilis.

To condense—

Total cases,	- - - - -	119
Doubtful,	- - - - -	43 — 76
Mother free from syphilis, in cases,	- - - - -	43
Both parents syphilitic,	" - - - -	23
Mother alone diseased,	" - - - -	10 — 76

K. bases the immunity of the mother upon careful examination, for the most part extending over several years, (durch eine umsichtige und in dem allermeisten Fällen durch viele Jahre fortgesetzte Beobachtung.) In this respect he has been more careful than others who have reported upon supposed cases of paternal transmission, but even his length of time is too short. To paraphrase the well-known saying, "Call no man happy till his death" into "Call no person free from syphilis until death," in face of the positive evidence that we have against this theory, we may say of M. Kassowitz' cases

that he has not seen or known about the true history of these women.

Indeed we cannot be positive that syphilis will not reappear after many years latency, and I will only remind you of Fournier's case, reported by him in *L'Ecole de Méd.*, Aug. 30, 1875, and quoted in *Lyon Médicale* of Sept. 19, 1875, to show that it does. Seventeen years of latency did not protect the unfortunate patient (who, by the way, was a medical man) from a sudden explosion of nervous syphilis with death. It is for this reason I say, that even though no lesions are visible for four years, the length of time that some of K.'s cases were under inspection, that fact proves nothing, nor does it disprove the possible existence of syphilis.

Of these 43 cases where the mother was free from syphilis, M. Kassowitz gives the history of 10; of the 10, 5 of the mothers were under inspection for a time varying from one to four years without showing symptoms of disease; in the 5th case, the mother is merely spoken of as well (die Frau war und blieb ganz gesund), no history of examination or time she was under inspection; in No. 6, no mention of mother's condition after the birth of syphilitic child; in No. 7, the mother is mentioned as entirely healthy, nothing more; in No. 8, no mention of mother's condition; and of No. 10, I wish to speak a little more fully. It occurred in his private practice, and is headed—

“ADVANCED SYPHILIS IN THE HUSBAND, WIFE HEALTHY.
AFTER THREE STILL-BIRTHS MERCURIAL TREATMENT OF
THE MAN, BIRTH OF A HEALTHY CHILD. SUBSEQUENT
TERTIARY MANIFESTATIONS IN THE FATHER.”

“A well-to-do citizen, formerly an officer, contracted primary syphilis in 1864, followed by secondary symptoms, and from which he apparently entirely recovered. In 1867, he married a young lady, 20 years of age, of good family.”

“At the end of 1867, she had a still-born boy at the

6th month ; in 1868, a still-born girl at the 7th month, and, 1869, a miscarriage at the 3rd month.

"Externally there was nothing visible upon these children. During the winter of 1872 and 1873, the husband was attacked with serpiginous ulcerations of the skin. He was treated by inunction and subsequently by the iodide of potassium by one of the first syphilographers of the city and his assistants (to whom I am indebted for the history of the father's syphilis), and in the early part of 1873, seemed entirely well. About this time the wife conceived for the fourth time, and in January, 1874, was brought to bed at full term of a healthy, unusually strong girl child. Shortly after birth, the child showed symptoms of dyspepsia (it had been artificially reared), came under my care, and from that time to the present has been under constant supervision. It has never shown a symptom of inherited syphilis. In the summer of 1873, the father went to the iodine baths at Hall, notwithstanding which he was attacked during the following winter with gummata of the skin and necrosis of the nasal and ethmoid bones. In the spring and summer of 1874, he was sent back to Hall, where he died in midsummer of the same year with the symptoms of miliary tuberculosis."

"The wife who had never been informed of the nature of the husband's disease, and is to-day ignorant of the cause of her miscarriages, being pronounced by the attending physicians as healthy, was naturally never put upon an antisyphilitic treatment, and has for the past two years, during which I have had repeated opportunities for observing her, enjoyed the most perfect health."

At the end of the narration of the history, the author exclaims, "this case also, by the birth of a healthy child, demonstrates in the most striking manner the freedom of the mother from syphilis," to which I answer, Amen. But that is not the point ; the argument is, whether syphilis has not been conveyed to the ovum by

the semen, and in this case upon what does this rest? Upon three miscarriages without any syphilitic symptoms. I object to that as evidence; miscarriages occur from other causes than syphilis, and their occurrence *alone* is not sufficient to base a diagnosis of syphilis per seminem. And M. Kassowitz is evidently of the same opinion, for on p. 54, when discussing the means to be employed for the exclusion of error, he lays down three rules to be observed, the third of which reads: "The syphilis of the child must be evident from undoubted symptoms. Premature births, death in utero, a sickly constitution at the time of birth, speedy death without any preceding outbreak of syphilis, are not by any means sufficient for founding a diagnosis of syphilis in the child."

If we act upon this instruction how can we admit the existence of syphilis in any one but the father in the case just cited? The case must be thrown aside as far as proof is concerned; indeed, were it used at all it would rather tend to show that a syphilitic man can procreate a healthy child, whereas the opposite should obtain, if the paternal transmission theory be correct.

I mentioned in an earlier portion of the paper the curious fact, that mothers apparently free from syphilis are able to nurse their own babies which are syphilitic and eminently contagious, without contracting disease, where strange women performing similar acts, usually pay the penalty of their rashness. Kassowitz also acknowledges that he has never seen infection from such a cause, and then goes on to say: "It would be proper for those who regard every mother of children syphilitic by inheritance, as the subject of latent disease, even though she present no evidence of syphilis, to prove the correctness of their view by experimental inoculation." This very condition was fulfilled in one case by Caspary in the 4 Heft der Vierteljahrsschrift für Dermatologie und Syphilis for 1875. Although this one case does not absolutely prove anything, inasmuch as the result may be

considered as coincidental, combined with other evidence it becomes strongly confirmatory. I shall be obliged to give the case in a somewhat condensed form for want of space and time.

Father. Undoubted syphilis ; primary lesion in 1872, several attacks of skin lesions ; obstinate iritis and various nervous symptoms.

Mother. Nothing which could be laid to syphilis, had been married for several years prior to husband's infection and had had healthy children. In 1874, became pregnant and aborted at third month.

Fœtus. At the third month ; umbilical cord entirely macerated ; of a dirty gray color ; that and the inner surface of the cavities of the body, together with the muscular tissues, were undergoing fatty degeneration. The placenta was in some places thick and fibrous ; in one part was soft and spongy—under the microscope it showed fatty degeneration.

The mother still showing nothing, Caspary persuaded her to be inoculated, which was done, "upon the left arm in four places with the secretion taken from condylomata lata, mixed with blood. The person from whom the secretion and blood were taken, was in the beginning of the eruptive stage of syphilis and had never been treated. The result was negative, and after waiting for six weeks without anything appearing, the woman was put upon treatment."

Here is a curious case : a woman apparently free from syphilis gives birth to a three months fœtus, which does not, it is true, present indubitable signs of syphilis. Were this all, the question might very properly be raised, are the mother and fœtus diseased ? but what shall we say, when we find that inoculation utterly fails upon the mother ? I believe we are taught that the only thing which gives immunity to acquired syphilis is a previous attack of the same disease. If this be true, we must conclude that this woman was syphilitic, notwithstanding her apparent good health, and this evidently was Caspary's belief also.

Interesting as the examination of such cases are, my time warns me that I cannot devote more space to this class, if I am to review the subject where syphilitic fathers have healthy children. Before doing so, however, let me give one case from the late Mr. Langston Parker's little work "*On the Mercurial Vapor Bath*," as it is peculiarly instructive.

"A young gentleman and lady married, with all the prospects of future happiness that fortune and apparent health could give. In due course the lady became pregnant, but miscarried. The same thing happened in her second and third pregnancies; a good deal of mental uneasiness was produced, and some suspicions arose. The fourth child was born alive, but at six weeks old had snuffling and the eyes became bad; condylomata also appeared about the arms. A neighboring physician of great local eminence was consulted, who said rather abruptly, 'The child is diseased.' The parents, as may naturally be supposed, were shocked and horrified beyond measure, the father having at a remote period before his marriage been affected with syphilis; but the mother had never exhibited the least symptom of the disease. He was put upon a course of blue pill and iodide of potassium; the mother at first was not treated. A fifth child was born, who at the end of the first month had symptoms of syphilis. The father was again only treated, and a sixth child was again born diseased. The mother was once more examined, but no trace of the disease could be found in the throat, vagina, uterus, or elsewhere. The patients were now placed under my care. I recommended that both should be treated by a full course of mercurial vapor, and that no intercourse should take place during that period. The seventh child was born healthy, and has remained so, and neither father nor mother have as yet exhibited any further symptoms of disease."

What I wish to call attention to in this case is, that though the father who was considered the sole cause of

the children's disease was repeatedly treated, the children persisted in being syphilitic contrary to what ought to have been the case, and it is not until the mother, who, mark you, was reputed free from syphilis, is subjected to antisyphilitic treatment, that this persistence is broken. If the disease came from the father alone, why was treatment in him so inefficacious? It is hardly explicable, unless we believe the mother's good health was only apparent, not real.

On turning to the other side of the question, where syphilitic fathers have healthy children, so long as the mothers escape infection, we are at once struck with the straightforwardness of the evidence and the regularity with which the phenomena occur. It is not a new opinion, broached for the first time by Cullerier, although he it was who in recent times has brought it more prominently forward. Hunter, as far back as 1786, in his *Treatise on the Venereal Disease*, writes: "Hence it has been supposed that the testicles and vesiculae seminales may be affected by the disease; that the semen may become venereal, may communicate the disease to others, and after impregnation may even grow into a pocky child. But this is all without foundation." * * * *

These views, however, were not generally accepted, and Cullerier, in 1854, before the Société de Chirurgie of Paris, stated that he had met with cases which shook his faith in the belief that syphilitic fathers must have syphilitic children, and he furthermore expressed his opinion that so long as the mothers escaped infection the children would be born healthy, and that the paternal disease had no direct influence upon the children's health. He then gives two cases which I here give in a condensed form:

1. *Father.* Indurated chancre, mucous patches of the anus, ulceration of the mouth, impetigo of the scalp, alopecia and cervical adenitis. After 15 days treatment, salivation. Notwithstanding all this, he married.

Mother. Showed no symptoms of syphilis either then or afterwards.

Child. Entirely free from syphilis. Age at time of reporting case, 18 years. Two children born later, also healthy.

2. *Father.* Indurated chancre six months before marriage; subsequent symptoms: roseola, cervical adenitis, and trouble in throat. During this condition of the husband the wife became pregnant.

Wife. Never showed symptoms of syphilis.

Child. The same as mother. Age 15 years.

M. Notta in 1860, published in the *Archives Générales de Médecine* his observations with the results, which amount to 11 in all. Of this number eight of the mothers were not infected; the number of children born to these eight mothers amounted to 15: every one of these 15 children was born healthy, and their ages at the time of reporting the cases, ranged from seven months for the youngest to 12 years for the eldest. Three mothers are left to account for: to these three, five children were born: the mothers were all syphilitic, and so were all the children but one, which died at the sixth month of intra-uterine life.

M. Charrier follows in the same journal with seven cases: in five of these, the mothers were entirely free from syphilis; the number of children born were nine, and all were healthy. The ages of these children ranged from eight months to six years. Of the remaining two cases, the mothers were infected; the number of children was five; one died a month after birth syphilitic, two were miscarriages, one at the fourth, the other at the seventh month, the latter with mucous patches at the anus, and two were abortions at the third month, both the foetus covered with copper-colored spots.

I need hardly mention that in all these cases the fathers were unquestionably syphilitic.

Now let me call your attention to one case, the second of M. Charrier's list. The man had a wife and a mistress.

Husband. Palmar syphilide.

Wife. Mucous patches of the anus, with subsequent lesions not detailed.

Mistress. Perfectly healthy—not the slightest signs of syphilis.

Children, (by the wife). One born healthy. Twenty days later; mucous patches, emaciation. Death one month after birth. This was in 1855. In 1856, a miscarriage at the fourth month, and again in 1858, at the seventh month. In this latter the child had mucous patches at the anus.

Children, (by the mistress). One, which never showed the least sign of syphilis: age, three years. This birth occurred within fifteen days of the wife's accouchement in 1858.

Objection may be raised as to this last child really being the man's: M. Charrier also considers this objection, and writes, "Mais j'ai à répondre que cet enfant ressemble en tout point à son père et qu'il a comme lui une conformation toute particulière des pouces, que les enfants légitimes avaient également présentés."

Diday, of Lyons, also gives a case:

Father. Undoubtedly syphilitic.

Mother. Perfectly healthy.

Child. Syphilitic? Oh no! Never showed the faintest sign of syphilis, although it was two years old at the time of reporting the case.

Mireur also gives two cases equally conclusive, one of them so apt and to the point that I will give it in detail.

"In January, 1863, M. C., employed in a government office, contracted an indurated chancre situated in the balano-preputial furrow, which was speedily followed by a double inguinal adenitis. By the advice of his physician, M. C. began mercurial treatment at once. This was followed for five weeks, when secondary symptoms supervened: a papulo-macular erythema, ulcerations of the throat, and impetigo capitis. In consequence of the energetic treatment to which the patient was subjected, one lasting for over four months, all the constitutional symptoms disappeared.

"Nothing having appeared up to December of the same

year, M. C. believed himself to be entirely cured. Notwithstanding the advice of the surgeon who attended him, M. C. determined to carry out a project of marriage which he had had in mind for some time.

"Immediately after marriage, Mme. C. became pregnant. In October, 1864, Mme. C. was brought to bed of a very fine boy, perfectly healthy, and of a good constitution.

"This child, the image of his father, grew up and was perfectly healthy to the age of two years. Towards the end of 1836, M. C., who retained a few vague souvenirs of his former disease, and who was charmed with the admirable health of his boy, had on the anterior portion of the lower lip, a slight erosion. As it remained perfectly indolent he thought nothing of it, and continued to kiss his child just the same.

"A short time after, the child showed upon his lip an erosion with a depressed surface, of a livid tint, with a remarkably indurated base, one centimetre in diameter. There was no doubt of its being an infecting chancre. Indeed, a short time after, a maxillary adenitis, with roseola syphilitica and extensive mucous patches of the anus, developed themselves."

Comment is scarcely necessary. If we accept the old theory this child should have been syphilitic and therefore not obnoxious to the action of the virus—but what do we find? Born healthy and remaining so up to two years of age, notwithstanding his father's syphilis, he becomes subsequently the subject of acquired syphilis.

Mireur's second case is briefly this:

Father. Primary lesion. Erythema syph. and ulcerations of the throat.

Mother. Never syphilitic. Strong and well.

Child. Never syphilitic—age 13 years.

Father subsequently had other syphilitic symptoms.

Oewre, of Christiania, has also presented several facts bearing on this question. In 1872, he gave the history of 24 fathers, all of whom were syphilitic. These 24

fathers have 42 children: not one syphilitic. In 1873 these numbers became: 29 fathers, 55 children, same results, not a syphilitic child.

As personal experience is always the most convincing to any to whom it occurs, allow me, in concluding this paper, to present three cases which have come under my personal supervision.

The first one occurred in the person of a friend, a college though not a class mate, who contracted syphilis. He was under my care for mucous patches of the tongue and throat, and occasional papular eruptions of the skin. Under treatment, he seemingly recovered and married. His first child was born abroad, and within a few months after birth died of a bronchial affection, without showing any symptoms of infantile syphilis. His statement is, that the attending physician upon being told of his previous syphilis, inclined to attribute the cause of the child's death to that. He was not sensible of having had, since he had been under treatment, any lesion which could be referred to syphilis, nor did he think his wife had.

Upon their return to this country Mrs. X. became pregnant and he wished me to take charge. I examined both carefully; he presented no symptoms. Mrs. X. had always enjoyed good health with the exception of being subject to pharyngitis and chronic inflammation of the middle ear since her girlhood. She presented nothing either from history or examination except a few irritated granular spots in the throat, referable more to pharyngitis, I thought, than anything else. As the husband was extremely anxious, and naturally desirous of taking all precautions, the wife during the period of gestation was placed upon a mild mercurial course. The child was carried to full time and born sound and healthy, weighing between seven and eight pounds. This girl was for some months under observation, but no signs of congenital syphilis were seen. I had occasion to see her four months ago and found her a stout, robust child, four years of age, without a symptom of syphilis, and I am told

she has never shown any. The husband during the wife's pregnancy had one or two little mucous patches(?) on the gums and end of the tongue, which disappeared on cessation from smoking and local use of the sulphate of copper. Neither then nor subsequently had he been placed upon mercurial treatment: purposely so.

After confinement the wife's treatment was discontinued; she was kept under observation; nothing was found in either herself or the child.

The family moved out of town, and two years later, no treatment having been pursued meantime, the wife again became pregnant. This third child I saw also four months ago, a fine chubby girl two years of age, showed nothing syphilitic, nor did the mother. The father I did not see, so am unable to tell if he has had any symptoms of his former trouble.

It occurred to me, if the father's semen was at fault, why were the children born healthy? He had syphilis, showed some signs of it during his wife's second pregnancy, and was not treated. From the evidence, I am forced to conclude that mother and children both escaped infection, notwithstanding his disease.

The second case was an ex-officer in the regular army whom I treated for chancre, erythema and mucous patches of the throat, mouth and tongue. After several relapses he married; and his wife was delivered of a fine boy whom I carefully watched for two years. In neither mother nor boy could I ever discover symptoms of syphilis, neither was there any history. During the wife's pregnancy and after the boy's birth, the father was under my care for repeated attacks of mucous patches of the tongue and mouth, and a desquamating papulo-erythematous eruption on the palms of the hands.

The third case was a man treated by me for erythema maculatum syph. and repeated attacks of mucous patches of the throat and tongue. He married, and in time and in due time his wife became pregnant and was delivered of a female child, who, when I first saw it, was

three years of age. Neither it nor the mother have presented the least trace or sign of syphilis.

After his wife's confinement the father came under my care for an ulcerating tubercle of the leg, which healed promptly under antisyphilitic treatment.

I have endeavored in the foregoing to give a fair idea of how this question stands, a question very difficult of solution. I trust, however, that the criticisms elicited here to-night by you, gentlemen, will throw some light upon this knotty and important problem.

16 W. 32ND ST., NEW YORK.

Reports of Societies.

THE CHICAGO MEDICAL SOCIETY.

Regular Meeting, Dec. 6, 1875.

(Reported by D. C. STILLIANS, M.D.)

The President, Dr. Wm. E. Clark, occupied the chair.

Dr. T. D. Fitch reported a case of retro-versio uteri cured by restoration, mechanical support and pregnancy.

Mrs. R., aged twenty-two years, married five years, mother of one child aged two years (living), since the birth of which she has never conceived—never had an abortion.

Patient began to menstruate at the age of sixteen. Always enjoyed robust health up to the time of her only confinement, when she was attended by a midwife, and rose from her bed in four days. She states that she has "never seen a well day since." From personal observation I can verify the fact of her previous good health.

During the time which has elapsed since her confinement, she has suffered from the following symptoms: Constant pain in the lumbo-sacral region, with a sense of bearing down and weight in the pelvic organs; con-

stant and obstinate constipation, with occasional attacks of rectal tenesmus ; pain extending down the thighs, rendering locomotion difficult ; almost constant vesical tenesmus ; a frequent desire to micturate, attended with more or less pain ; dyspepsia, with acid eructations, anorexia, nausea, and sometimes vomiting, with consequent progressive emaciation.

Menstruation has been somewhat irregular, both as to time and character—sometimes occurring every twenty days, sometimes twenty-eight days, the former time the rule, however. She has been menorrhagic, the discharge being excessive and partially coagulated. The epochs were usually attended with evidences of pathological congestion, such as pain and fever. Leucorrhœa of a muco-purulent character has been constantly present, though not accompanied by profuseness of discharge.

On the 17th of March, 1871, the physical signs were as follows :

In the dorsal decubitus, (which I prefer) the touch revealed a large ostium *vaginæ*, the urethra thickened and greatly hypertrophied, and a round, smooth and hard body in the axis and at the distal extremity of the vagina. Not finding the cervix, and presuming this body to be the uterus, my finger was passed along the anterior wall of the vagina (posterior wall of the uterus), and the cervix was felt immediately behind the pubic arch, and impinging strongly on the basfond of the bladder and the urethra.

The uterus was sensitive to pressure, and movable, indicating the absence of adhesions.

On conjoined manipulation, the body of the uterus was found in abnormal position. The speculum revealed eversion of the *labia uteri*, with granular erosion and patulous os.

To the sound there was hyperæsthesia of the cervical canal. It passed in a downward and backward direction to the extent of $3\frac{1}{2}$ inches, some pain being elicited by pressure upon the fundus. No blood followed its

removal, and the pain being transient, no metritis or endometritis was supposed to exist.

Diagnosis.—Retro-version, with chronic endo-cervicitis.

Treatment.—The indications were to restore the uterus to its normal position, and retain it there, at the same time to administer such remedies as would relieve the gastric trouble, and to employ such applications as would subdue the endocervicitis and heal the erosions. Believing in the primary restoration of the uterus, and that then, without material treatment, the evil results of a malposition will cease, I take this to be the first step in the course of the treatment. If we should adopt the plan of removing the first factor in the series of causes and effects, the subinvolution should be first treated. But it would be impossible to cure this hypertrophy while the circulation is so embarrassed by the distortion of the blood-vessels supplying the parts. In the majority of cases, on restoring the organ and thereby relieving the embarrassed circulation, the congestion and enlargement, together with the other evil results, disappear spontaneously. I therefore touched the granular surface of the cervix and the cervical canal with a saturated solution of iodine in pure creosote, and introduced a cotton tampon saturated with a solution of tannic acid in pure glycerine, in the proportion of 3 ij of the acid to 3 j of glycerine, for the purpose of relieving irritation, and hardening and accustoming the parts to the presence of a foreign body.

A pill containing two grains of the sulphate of quinine with one of the sulphate of iron, was also given before each meal, and a powder containing eight grains of the subnitrate of bismuth, and four of pepsine, was ordered after each meal.

In four days the tampon was removed, and the parts thoroughly washed with warm water by means of the uterine Anssing syringe; another tampon was then introduced. The patient expressed herself as feeling some-

what improved, in two days more, the tampon giving her great comfort and support; when it was removed and the parts washed as before, there was no apparent soreness or tenderness. The dislocation was then reduced by manipulation with the patient in the lateral decubitus (Sims'). The index finger was introduced into the vagina, pressing it against the body of the uterus, as near the fundus as possible, carrying it upward and forward in the arc of its descent. When carried as high as possible, it was held in this position for a few minutes, so as to give time to change the pressure from this point to the anterior lip of the cervix, which was carried downward and backward in the concavity of the sacrum higher up, if possible, than its normal position. It was held for two or three minutes that it might become accustomed to its new place, thus preventing its return before the pessary could be introduced. The latter was a modification of Hodges' horse shoe pessary, selected on account of the hypertrophied condition of the urethra. Its arms were partially straightened on account of the fullness of the post vaginal region. No discomfort was experienced by the patient on arising, and in fact there was no consciousness of the presence of a foreign body in the vagina.

A solution was ordered for vaginal injection, to be used once or twice daily, in order to keep the parts clean and prevent accumulation of the secretions behind the instrument, thus endangering irritation, ulceration, etc.

Patient expressed herself as much improved in every particular, six days afterward. To the erosions and cervical canal the iodo-creosote mixture was again applied.

April 4. Improvement continues in every particular. No inconvenience from pessary after removal. The points upon which it had pressed were found entirely healthy. It was reintroduced after applying the creosote mixture.

The patient was treated in the same manner on the 14th,

21st, and 28th, and May 3rd, and 23rd. At this last date it was found that she had just passed her menstrual period without the flow. Her improvement was so marked that I correctly supposed her to be pregnant. The pessary was worn and the injections continued till the end of the 3rd month, when it was removed, but the patient returned next day, complaining of the loss of its support, and a sensation of weakness. The pessary was again introduced and allowed to remain till the middle of the 5th month, when it was finally removed. She was at last delivered of a healthy boy.

In order that involution might be well completed before she arose from bed, I kept her in the recumbent position for three weeks, when she arose without the recurrence of the displacement. She has now remained free from uterine disease for a period of four and a half years.

The subject was discussed by Drs. Quine, Foster, and others.

A partial Report of the Section on Practical Medicine—Diseases of the Chest—was presented by E. Fletcher Ingals, M.D., as follows:

Since the appointment of this Section there has been no great advance in that part of practical medicine relating to diseases of the chest. Our theories regarding their causes and pathology have experienced no marked alteration; our methods of diagnosis have not been noticeably improved, and the elements of prognosis remain unchanged.

In treatment there has been some advancement, not so much in the discovery of new methods, as in the more general application of old ones.

I have observed in one instance an anomalous sign, in connection with consolidation of the lung, consisting of numerous fine blowing or whistling sounds resembling sibilant rales; these were heard over the apex of the right lung, and were at first supposed to be fine bronchial rales, but directly their rhythm pointed to their source;

for they occurred not only during inspiration and expiration but also in the period of rest following the respiratory act. They were, in fact, independent of the air in the bronchial tubes and were synchronous with the contraction of the heart, as was easily demonstrated by directing the patient to hold his breath. Though no other auscultatory signs were present at the time, I believed this to be the result of pressure, by tuberculous deposits, upon several small arteries within the lung. A few weeks after my examination, the patient died of some intercurrent affection and I had an opportunity of verifying my diagnosis by a post-mortem examination, which revealed tuberculous consolidation in the apex of the right lung.

Surgeons enjoin rest in the treatment of any acutely inflamed organ; but until lately physicians have too much disregarded this rule in treating pulmonary affections. In pleuritis and pneumonia much benefit will be effected by keeping the patient quiet, diminishing as much as possible, consistently with good aeration of the blood, the frequency of respiration, and by limiting movements of the affected side. The same course of treatment will often be beneficial in pleurodynia, pneumothorax and emphysema; and sometimes in phthisis. In the acute diseases mentioned, whether the inflammation be trifling or considerable, the patient should be put to bed and kept quiet until he recovers. Coughing should generally be checked, all exertion prevented, talking prohibited; indeed, the patient must do nothing to waste breath.

Respiratory movements may be restrained to a considerable extent by the patient's voluntary efforts, if his attention is only drawn to the matter. He should be furnished good air and in some cases, especially of pneumonia and bronchitis, it is best saturated with watery vapor.

The room should be kept well ventilated and at a moderately high temperature. Where moisture is desired,

steam may be introduced into the apartment. Breathing compressed air has been found to lessen the frequency of respiration ; it is, therefore, recommended in some cases, though unfortunately it can not often be employed for want of conveniences. It may be that in pleuritis and pneumonia, benefit would be derived from the respiration of pure oxygen, because of the longer rest which would thereby be afforded the inflamed organ.

By external appliances we may restrict the movements of the affected side, with the effect of greatly relieving the patient's sufferings, and, doubtless, shortening the course of the disease.

In simple pleurisy and pneumonia we may accomplish this end by adhesive plaster applied as directed by Dr. F. T. Roberts, in the *London Practitioner*. His method is, to apply two or three layers as follows : "The first strip is laid on obliquely in the direction of the ribs ; the second across the course of the ribs ; the third in the direction of the first, about half overlapping it ; the fourth as the second ; and so on, until the entire side is covered. A strip is also passed over the shoulder, which is kept down by another fixed round the side across its ends." The transverse strips should reach from the spine to the mesian line in front, and all should be applied if possible during full expiration. It is sometimes desirable to fix the chest in inflexible dressings, as in pneumothorax and fractures of the ribs ; for this we may employ plaster of Paris or any similar dressing such as surgeons use in making immovable splints. In emphysema with bulging chest walls, I would expect benefit from a nicely fitting elastic jacket ; which would in some measure compensate for the loss of elasticity in the lungs. Unless too great pressure were made, this appliance could not harm the thoracic walls ; it would rather, by its resistance, induce hypertrophy of the inspiratory muscles, and by its elasticity aid the expiratory, in their difficult task of expelling vitiated air from the lungs.

It seems reasonable to hope that this appliance would ultimately reduce the emphysematous chest in size, and greatly facilitate the patient's breathing. At first the pressure must be slight, but as the muscles become stronger it may gradually be increased. The jacket should be made to lace both in front and behind, so that the pressure may be regulated at will.

Paracentesis-thoracis has been practiced since the days of Hippocrates, but its popularity has been greatly increased by the recent introduction of improved aspirators. This operation in olden times was the *dernier ressort*; but through the teachings of Rousseau, Bowditch, Gairdner and others it became the common practice to employ the trochar as soon as other remedies had failed to produce absorption. With recent instruments the operation has become so easy, both for physician and patient, that we are reluctant to await even the action of diuretics and purgatives, and are almost tempted to perform paracentesis without allowing nature an opportunity to remove the fluid. However, this like all other extremes should be avoided, and the operation confined to those cases which are not curable by simpler remedies. Where a fair trial of diuretics and purgatives has been unavailing, and in all cases in which the fluid occasions urgent dyspnoea, the operation should be unhesitatingly performed. The aspirator may be employed with comparative safety in removing fluid from the pericardial sac, but we must not forget that physicians of large experience have punctured a dilated heart, in consequence of a mistake in diagnosing this condition.

Experiments have been made with the aspirator in treating pulmonary cavities. The cavities were punctured through the chest wall, their contents withdrawn, and remedies injected calculated to alter their surfaces so as to promote the healing process; but, as might have been expected, these experiments have proven unsatisfactory. Even if the cavities could thus be induced to heal, it is questionable whether the procedure would often

be justifiable, in view of the danger from injury to the blood vessels, and of the possibility of establishing pneumothorax. When we remember that, in the majority of cases, pulmonary cavities result from a constitutional and not a local disease, we are surprised that good results could have been expected from this treatment.

I have recently seen a large aneurism of the abdominal aorta in which no murmur was present during the life of the patient. The tumor sprang from the anterior surface of the vessel between the diaphragm and cœliac axis, and protruded in the left hypochondriac region. It had a forcible heaving impulse with each cardiac systole. Death occurred about thirty-six hours after rupture of the sac.

Hospitals.

ST. LUKE'S HOSPITAL, CHICAGO.

1. *Extensive Syphilitic Disease of the Vault of the Cranium; Removal of two pieces of bone in their entire thickness, the larger piece measuring four by three inches; Recovery.*

(Under the care of JNO. E. OWENS, M.D.)

Mrs. K., aged 40 years, contracted syphilis five years ago. She has been under supervision during the past year for syphilitic disease of the larynx, and pain in the skull. In September, 1875, I found two soft doughy swellings, on the top of the head, each being the size of a silver quarter. Incisions having been made in each of these, the probe came in contact with denuded and roughened bone. The scalp was separated from the latter to the extent of several inches in every direction around these doughy swellings.

The diseased surface, which furnished a free discharge, had by means of the openings, proper drainage. The part was very offensive, requiring a liberal allowance of carbolized water. These two openings in the scalp subsequently enlarged, the one being 2 x 2 inches, two-thirds of which was to the right of the sagittal suture, and in close relation to the coronal suture; the other being 2 x $\frac{1}{4}$ inches.

At the earliest moment that the dead bone could be moved with a probe (Feb. 1, 1876), an incision was made across the scalp, from one of the openings above mentioned to the other, and the patient relieved of the offensive mass.

A cushion of soft cheesy matter covered the under surface of the roughened dead bone removed, thus affording some protection to the dura mater and the brain. The larger bone removed measured 4 x 3 inches; the other, 2 x 1. The opening in the skull, of course, corresponding in size and shape to the last bone, reached from a point $\frac{1}{4}$ inch on the left of the sagittal suture, $3\frac{1}{4}$ inches to its right side. The long diameter prolonged touched the left parietal protuberance and the outer canthus of right eye. Previous to the operation the patient had been a great sufferer in consequence of pain in the skull.

The medical treatment consisted for the most part of iodide of potassium and cod-liver oil. The larynx for months has been enlarged and stony. The patient could not speak above a whisper for a long time. The voice has not regained its natural tone, being more or less of a bleating quality. Sutures were used for the incised wounds, the openings in the scalp were filled with carbolized lint, a wad of oakum applied over all, and the part supported by moderate and diffused pressure. The frequency of the washings grew less as the discharge diminished and became less offensive.

No untoward symptoms supervening, the patient was permitted to get up at the expiration of 12 days. During this time she improved rapidly in general health, gaining both flesh and color.

Feb. 21st. Patient discharged.

April 1st. Wounds entirely healed.

Although the tissues that have filled in and closed the opening in the skull are very dense and firm, the pulsations in the brain are both readily felt and seen.

2. *Tracheotomy in Croup; Recovery.*

March 8th. I was called to see a little boy, aged six years, that was said to be dying. He "caught cold," Feb. 27th; began to breathe with difficulty, March 5th; and to have croupy cough, March 7th, with increasing dyspnoea. Paroxysms of difficulty of breathing supervened, exciting the alarm of the friends and rendering the case very distressing. Perspiration covered the forehead, upper lip and chin; the whole face wore a purple

hue; pulse frequent; lungs normal; patient had a fair amount of strength.

No treatment had been used so far as could be learned, except the employment of the usual useless domestic remedies, so called. Deeming this a case where prompt relief to the breathing was demanded, I had the patient wrapped in a blanket and carried to the hospital, only a few doors distant, where, chloroform having been administered, the trachea was at once opened above the isthmus. A few detached pieces of false membrane were removed, and the tube introduced. The operation was attended by almost immediate relief. The first canula introduced, being too much curved, impinged against the anterior wall of the trachea, and had to be laid aside after several days. The bivalve canula is occasionally useful where there is difficulty in placing the instrument. It is, however, too likely to injure the lining of the trachea, and this danger increases with the frequency of the withdrawal of the inner tube. Whether one should arrest all haemorrhage previous to opening the trachea, depends upon the urgency of the symptoms.

The operation is of but little use, unless some *competent* person is at hand to keep the tube clear. Dr. Hutchinson, the resident, saved this patient's life many times. An example: A paroxysm of dyspnea came on; the inner tube was removed and cleansed in scalding water; dyspnea increased; nothing in view obstructing the outer tube, and nothing could be wiped away; dyspnea increasing to an alarming degree; inner tube replaced; no relief; both tubes removed; patient seemed to be almost dead; a drop or two of cold water into the wound excited a paroxysm of coughing, some inspissated mucus was expelled and the patient revived.

The medical treatment consisted of ferruginous tonics and an occasional anodyne. The patient found much comfort from the use of the steam atomizer, which played upon the wound.

March 15th. Patient able to speak, to blow and to whistle.

March 16th. Tube removed.

March 19th. Allowed to get up.

March 20th. Air does not pass from the wound.

March 29th. Patient discharged, well.

Summary of Progress in the Medical Sciences.

I. OBSTETRICS.

1. *Prophylactic Measures against Puerperal Fever.* BISCHOFF. (Correspond. *Bl. f. Schweizer Aerzte*; *Allg. Med. Central Ztg.*, 13, 1876.)

Prof. Bischoff, of Basil, considers puerperal fever as a traumatic fever which is very changeable in its symptoms. No puerperal fever without lesion and infection. And the usual locality of infection, he thinks, is not the placental site but the cervical canal, and especially the external os uteri; the frequent lacerations at these places, as also the lesions at the site of the urethral orifice, during the act of parturition, must be looked at as the usual starting points for the puerperal fever. The infection sometimes is occasioned by foul amniotic fluid or by the lochia rendered septic by decomposed coagula, shreds of the amnion or pieces of the placenta. But more frequently the septic virus is introduced from without by the unclean instruments or hands, or even by the entrance of foul air. Besides, the professor recognizes in some persons a greater predisposition to a local infection of wounds.

B.'s safeguard against puerperal fever is carbolic acid, which after a faithful trial of more than seven years he has good reasons to recommend most heartily. He employs it in a regular antiseptic treatment just as surgeons do in operative cases. His aim being to remove all noxious matter before the genitals are wounded, and to prevent any infectious matter from entering these parts after they have received some lesion. Prof. B. enforced the following plan of antiseptic treatment in his lying-in hospital at Basil: At the commencement of labor pains the woman receives a bath and a vaginal injection of a lukewarm aqueous solution of carbolic acid (strength two per cent.) And these injections are repeated every two hours in all cases of protracted labor, of artificial premature labor, and of dead fetus. Before making an exploration or operation the hands and instruments must be washed in a three per cent. solution of carbolic acid and lubricated with a carbolized glycerine ointment, or a carbolized oil containing 10 per cent. of carbolic acid. Immediately after the delivery the external parts are examined and all wounded places are touched with the carbolized oil. Lacerated wounds of the mucous membrane of the vagina, and those frequent, though superficial, rents near the orifice of the urethra, are then united at once by means of fine catgut sutures; larger lacerations of the perineum are closed by silver wire, and these sutures are left undisturbed until the woman can get up, i. e., for two weeks. And it is a very rare thing, then, not to find these lesions

healed by first intention. After all the wounds are closed, a pledge of charpie, well saturated with carbolized oil, is put in the introitus vaeine, to be renewed as often as it drops out, *i. e.*, after urinating and vaginal injections. Besides this, a second and larger pledge of carbolized charpie is laid over the external fissures or cuts. And in all cases, from six to twelve hours after delivery a vaginal injection with a two per cent. solution of carbolic acid is made, and afterward repeated two or three times daily; and if any coagula or pieces of the placenta are retained, the uterine cavity is washed out also by injections of carbolized water. These injections have never occasioned any untoward symptoms or had any poisonous effect.

As to the effectiveness of his prophylactic treatment B. gives the following statistics, concerning which he states, that he could not get the nurses to strictly comply with his directions, until two years ago, when the sisters of charity were employed as nurses.

Time.	No. of confinements.	No. of deaths.	Per cent.	No. of puerp. fever.	Per cent.	Remarks.
1862 to 1867	514	33	6.4	116	22	Previous to antiseptic treatment.
1868	83	..	4.0	37	44.5	Beginning of antiseptic treatment.
1869	109	..	6.4	41	37.6	
1870	80	0	0.0	13	22.3	
1871	139	2	1.4	31	22.3	
1872	171	4	2.9	42	24.5	Better antiseptic treatment.
1873	202	2	1.0	34	16.8	
1874	233	4	1.7	25	10.7	Perfect antiseptic under the sisters of charity.
1875	224	0	0.0	A few	

2. *Subacute Cystitis following Parturition.* Dr. W. L. RICHARDSON, of the Boston Lying-in Hospital. (*The Boston Med. and Surg. Jour.*, Feb. 3, 1876.)

This condition is not mentioned in the works on Obstetrics of to-day. The reporter details four cases observed during the past three years. He suggests the possibility of cases of subacute cystitis being mistaken for metritis or circumscribed peritonitis. In all four of the cases reported, more or less protracted pressure by the fetal head upon the bladder was exerted during the labor. In the severer cases—two out of the four—the invasion of the disease was announced by a chill; in one of these two cases, a relapse was initiated by a chill. Great dysuria in all cases was a marked feature and the symptom most complained of. Tenderness over the inferior abdomen was elicited upon pressure. Pain, nausea and vomiting were noticed in the severer cases. In all four of the cases there were mucus, pus, and, in only one case, blood, in the urine. The record of the pulse, temperature and breathing was singularly high in the evening, as compared with that in the morning. The temperature ran as high as 103° F., and the pulse as high as 124 beats per minute—these being the extremes noticed in either case. The case treated longest was under observation twenty-six days.

The only treatment adopted was poultices to relieve pain and tenderness; morphia, *per orem vel anum*, to quiet pain or dysuria; after subsidence of acute symptoms, the bladder was washed out with warm water or a weak solution of carbolic acid. In all cases the washing out was followed by a sudden subsidence of all the symptoms, that was very striking.

II. GYNECOLOGY.

1. *On so-called "Ulcerations" of the Os Uteri.* Dr. CLIFTON E. WING. (*Boston Med. & Surg. Journal.*)

This subject is treated with such crispness and vigor, in a paper read before the Norfolk District Medical Society, Jan. 11, 1876, that we cannot forbear making lengthy extracts from it.

What is commonly considered and treated as ulceration of the womb is not ulceration at all, but one of two conditions, both of which, once clearly understood, are simple enough. In the first condition, frequently found in its typical form in women who have not borne children, and where the cervix and os retain the normal shape, there is seen a red abrasion often entirely encircling the os; it is occasioned by the irritating discharge poured out by a uterus affected with catarrh, or, as is commonly said, endometritis. We all know how often comes a so-called cold in the head, with its accompanying discharge from the nose; the uterine mucous membrane is liable to a similar catarrhal discharge. The woman affected with a discharge from the nose removes it by the use of the handkerchief, and so prevents it from excoriating the upper lip and the edge of the nostril; if the discharge is still sufficiently irritating or excessive to cause some excoriation, perhaps the use of the handkerchief is supplemented by an application of cold cream or other unguent to the part. Now let the same woman, from, it may be, the same cause, have a uterine catarrh. She cannot keep the irritating discharge constantly removed from the surface of the cervix uteri, nor can she practically apply any unguent; and the end of the cervix in that woman is soon in the same condition as the upper lip and nostril of the little ragged boy who runs about the street on a wintry day, having no handkerchief to use and no cold cream to apply: namely, the epithelium is removed, and a raw, excoriated surface comes to view.

Catarrh of the uterus has generally become chronic before the patient applies to the physician, and the papillæ at the abraded spot, as a result of long-continued irritation, frequently have become much hypertrophied, and deceive the inexperienced eye into diagnostinating granulations. Too often, additional irritation is caused by the physician, who, totally misunderstanding the case, happens to cure the "ulcer" by lunar caustic or his other "favorite application." What educated physician

would think of attacking the excoriated nostril and upper lip referred to by "burning out the 'ulcer,'" giving no attention to the catarrh, its cause? Why should we do the same thing in exactly the same condition in another part of the body? If the discharge be stopped by proper applications to the inner surface of the uterine cavity, the so-called "ulceration" will take care of itself; for you may depend upon it that if you are not more skillful than most physicians in making your application, enough will be spilled upon the excoriation outside to stimulate that part sufficiently.

The other condition mistaken for ulceration is "rupture of the cervix with eversion." It is important that this be understood correctly, as many able physicians, and specialists even, have failed entirely to recognize the real trouble or its proper treatment, and it explains those cases which have been described as "severe ulcerations which require active treatment," wherein the strongest acids and caustics, the actual cautery, and even amputation of the cervix, have been tried in misdirected attempts to bring about a return to a normal state. Dr. Emmet was the first to recognize and describe the true condition in this disease, and to invent and practice the operation for its radical cure. To him we are indebted for one of the most important steps which modern gynecology has taken in its march of improvement.

Rupture of the cervix uteri occurring in labor is generally thought to be rare, and to an extent sufficient to attract the attention of the accoucheur by symptoms is so, but it occurs in a less degree in a large proportion of childbirths. As pointed out by Dr. Emmet, if the rupture be anterior or posterior to the os, the side walls of the vagina tend to hold the torn surfaces together, so that union usually occurs: but if it takes place laterally from the os, the rupture tends to gape, the posterior lip being held back by resting against the posterior wall of the vagina, while the anterior lip shoves forward in the axis of the vagina. The condition is analogous to that of ectropium where by the rolling outward of the lid the bright-red conjunctiva is seen. Now let any physician who does not understand the condition examine with a speculum, and what does he see? Instead of the small, conical cervix which he has expected would fall readily into the end of his speculum, he finds a condition of things which startles him. With his largest speculum he cannot command a view of the whole cervix. The anterior and posterior lips, as he sees them spread out, while he thinks he is looking at their ends only, seem to him wonderfully hypertrophied. This appearance of hypertrophy, which is so nicely produced by eversion, may be demonstrated by any one by simply standing before a mirror and observing the lips in their usual position when the mouth is closed; then noticing the appearance produced by forcibly evertting them, the upper lip being rolled up toward the nose and the lower lip being pulled down toward the chin; the apparent hypertrophy vanishes astonishingly when the lips are allowed to regain their normal position. The cervix soon becomes so flattened out that traces of a rupture are not visible to an untrained eye, and the observer sees what

he has no doubt is the external os, but what in reality is the opening of the canal at the level of the upper limit of the rupture. All about this opening he sees a large extent of red, raw-looking surface, nothing more nor less than the mucous membrane of the canal rolled outward as above explained, its bright color contrasting with that of the vagina and external surface of the cervix almost as markedly as does the color of the mucous membrane of the mouth with that of the skin ; but as the external os is thought to be before the eye, the diagnosis of a hypertrophied cervix with ulcerations seems to be clear. Let any one evert the lips before a mirror as noted above, and see how readily the healthy red mucous membrane, with its little irregularities of surface might appear, to one *expecting* to see inflammation and ulceration, to be in such condition, and it is easy to understand how the physician who all his life has heard of ulcerations of the uterus is liable to be misled.

Moreover, this eversion of the mucous membrane is apt often enough to give rise to a catarrhal discharge from the canal, if this is not present already. Such a discharge will produce excoriation here more readily than when the cervix is in its normal shape. In the everted mucous membrane the glandulae nabothi frequently become enlarged, and degenerate into cysts, some on the surface, others deeper ; this is another condition which is mistaken for granulations.

The rupture may take place on one side only, and be small in extent, yet cause much rolling out. In old cases all traces of it are effaced by the flattening out of the cervix on the posterior wall of the vagina, and when seen, perhaps the mucous membrane, by the formation and bursting of the little cysts, or it may be by the applications it has received, has become hard and fibrous. The amount of eversion depends much upon the extent of the rupture at the external os. A rupture which is limited here but extends upward along the uterine canal will not cause much eversion, but will give an open, patulous canal, a condition often met with, and puzzling to one who does not understand its cause.

The only safe rule to follow is this: In case of a large cervix always examine to see if eversion be not present. In hypertrophy the cervix enlarges gradually towards the body ; but, as is pointed out by Dr. Emmet, with eversion there is more or less of a neck above the everted parts, an approach to the shape of an inverted mushroom. The *practiced* finger can detect this. Try with tenacula, one on each lip, and see if they cannot be rolled inward ; if there be eversion, and this be done skillfully, it will surprise any one seeing the operation for the first time to note how the great mass resolves itself into the typical conical cervix, and how on restoration of the mucous membrane to its normal place the "ulceration" disappears. Sims' speculum is here essential ; the old round specula do not give room for the manipulation, and the valve specula, by distending the vagina with their branches, tend to hold the uterine lips apart.

Emmet's operation for the restoration of the cervix consists simply in refreshing the surfaces and bringing the parts together again, retaining them there by sutures until union has taken place. Of course, care is taken to leave the uterine canal intact. The operation is best done under ether, and the patient should lie quietly in bed for several days after the sutures are removed.

I think there has been more unintentional malpractice by physicians of the better class in such cases than in any other affection of the body. A short time ago I saw a patient who had been treated by a physician of good standing. He at first made applications of lunar caustic once a week; the "ulceration" proving rebellious, he came oftener and oftener, until the woman had a daily application for some weeks. The whole cervix was raw, bleeding on the slightest touch, while the physician was "fearful it was going to prove cancer." Dr. Emmet reports a similar case, and they are not very uncommon, for cancer is quite often suspected with this condition of eversion. With regard to applications, Dr. Emmet remarks: "The nitrate of silver in the solid form is in more common use, from its supposed mild action, than any other agent, yet from indiscriminate and too frequent use it has done more harm than any of the stronger caustics. It is not that I would so much deprecate its use in the hands of an expert, but, from its convenient form, it is too great a temptation for many who are the most ignorant to flatter themselves that they have mastered the art as a specialty when once in possession of a porte-caustique and speculum. This practice has become a scandal to the profession."* The stronger caustics in ignorant hands are of course worse. I have seen two cases within a year wherein there were cicatrical bands binding the cervix firmly to the vaginal wall and causing displacement, for which little could be done, and in both instances the only probable cause was the application of some caustic which had run down upon the vagina.

I would utter a caution against accepting as conclusive the statements, supported often by a report of cases, which now and then appear in the journals, that the most powerful caustics can be applied to the uterine canal up to the very fundus with wonderfully successful results and without danger. It should be remembered that the cases where this has been tried with disastrous effects never get into print. Many times when the operator thinks he has gone to the fundus he has not passed the inner os, as I have verified by observation.

As regards the choice of remedies I cannot do better than quote Dr. Emmet again: "In our selection we must use those calculated to do the least harm to the portion of the mucous membrane which may still be in a normal condition. Rare indeed is the necessity of applying, within the uterine canal, caustics, the cautery, or the strong mineral acids. It is true that these remedies act promptly, so far as to heal an erosion and to check all uterine discharge. But we cannot restore the

* Emmet, Philosophy of Uterine Disease, New York Medical Journal, July, 1874.

patient to health by so far changing the character of the mucous membrane as to leave it a mere cicatricial surface. Our ultimate success will be directly in proportion to the condition in which we leave this membrane, for we will need its healthy action in the after-treatment of the case. That individual cases escape with but little damage is only due to protection afforded by the secretions; yet the practice, as a rule, is disastrous enough to deprecate their use."*

Let me here point out a common error. A physician has a patient who has symptoms which he does not exactly understand, and he finally concludes to make a speculum examination; finding the cervix in the condition which we have been considering, and which he has always looked upon as ulceration, he fails to look further, thinking that he sees enough to account for all the suffering, when that which he has found may of itself be of no importance whatever. In this way I have known the worst affections of the uterus, the rectum, and the bladder overlooked. We all know of cases in which symptoms arising from disease of the most distant parts of the body have been foolishly referred to the same cause.

While decrying the ignorance which has so often led to such practice, let us not slight uterine affections. Many a uterine disease which would yield readily to treatment is neglected or not suspected, and the patient is allowed to fall unnecessarily into invalidism.

The close connection between certain cases of mental trouble and uterine disease cannot be overlooked with impunity. I do not refer to hysteria, which all know is commonly enough so associated, but to more serious affections—cases of melancholia, monomania, and the like. I have seen such patients get well at once, when seclusion in an asylum was apparently near at hand, by simply removing the source of irritation, some uterine disease. We must try to avoid both overestimating and undervaluing the importance of uterine affections.

III. THERAPEUTICS.

1. *Treatment of Rheumatic Fever with Salicylic Acid.* (Ed. *Times & Gaz.*, 1876.)

We extract the following details from a paper by Staff-Surgeon Stricker, in the *Berliner Klinische Wochenschrift* of January 3, 1876. For several months all the cases of acute rheumatism in which the local symptoms were strongly marked (fourteen in all) were treated with salicylic acid. The preparation used was, however, not the ordinary impure commercial acid, but one that by repeated crystallization had been rendered almost perfectly pure. Thus prepared it consists of shining

* Emmet, *Surgery of the Cervix.* New York. 1869.

white needles, which have no smell, and dissolve completely in water and alcohol so as to form a clear solution. This pure acid can be given internally in considerable doses without any of those unpleasant results which have followed the use of the commercial acid, which probably owes its caustic properties to the presence of other substances—for instance, carbolic acid. The pure acid only excites some dryness in the mucous membrane of the mouth and pharynx, followed by an increased secretion from their surfaces. This inconvenience can, however, be obviated by giving the acid in half-gramme or gramme doses every hour, in the form of powder, and enclosed in a capsule; and in the treatment of rheumatic fever the administration is continued until the joints which were previously affected can be moved without pain. To quote Dr. Stricker's words, "All the patients thus treated were not only relieved of their fever, but also of the local symptoms—*i. e.*, the swelling, redness, and especially the painfulness of their joints—within forty-eight hours; most of them even within a much shorter period." The largest quantity of pure salicylic acid which was found necessary to produce this effect was fifteen grammes, and the smallest five grammes; but that even larger quantities can be taken internally without injuring the digestive apparatus is proved by the fact that one patient actually took twenty-two grammes in the course of twelve hours through an excess of zeal on his own part; but, nevertheless, his tongue became clean and his appetite returned in the course of this vigorous drugging. As far as Dr. Stricker's observations go, the more acute the case the better the action of the acid. He finds it best to begin the treatment in the morning, for then its effects are generally so decided by the evening that it is unnecessary to disturb the patient's rest to give him his medicine. The general phenomena which were observed to follow large doses of the acid were copious perspiration, ringing in the ears, and slight deafness, and in two cases the patients became more than usually lively. Dr. Stricker does not pretend to express any opinion at present on the effect exerted by the acid on the cardiac complications of rheumatic fever. Most of his cases either had old valvular disease or else were suffering from a recent endocarditis at the time of their admission. The details of five cases are appended to Dr. Stricker's paper, and the temperature-sheets are given in graphic form in four of them, and we can only say that they confirm in a most striking manner what has been above stated as to the value of the salicylic treatment.

A further testimony in the same direction is that of Dr. L. Riess (*Berl. Klin. Wochenschrift*, December 20, 1875, "On the Internal Use of Salicylic Acid"). He speaks of the results obtained in acute rheumatism as unexpectedly favorable, and points out that the action of the salicylic acid must be more than purely symptomatic, since in some cases a single dose not only permanently reduced the temperature, but also was followed by general improvement in the patient's condition. We again remind our readers that the acid used must be CHEMICALLY PURE.

2. *The Indications for Quinine in Surgical Practice.* VERNEUIL.
(*Gaz. Mèt., Med. Times & Gaz.*, 1876.)

M. Verneuil states that quinine may be beneficially employed in treating ataxic, neuropathic and septicæmic complications. 1. It is not necessary for the ataxic phenomena to be of a true intermittent type, for quinine exercises its regulative action when no palustral element exists. 2. It is especially valuable in combating neuropathic phenomena, and nowhere can its influence be better appreciated than in affections of the eye. M. Verneuil is in the habit of prescribing it after operations on this organ, and he has frequently obtained most remarkable results. 3. In septicæmic accidents the salutary action of quinine is beyond all doubt, and given in large doses it still constitutes the best agent we have to oppose to purulent infection. 4. As an antiseptic it appears to act in two modes—modifying and diminishing the formation of pus, and operating as a direct antiputrefactive—so that it is advantageously employed as a topical antiseptic. 5. Its surgical employment is especially indicated for women and children, who are more disposed than men and adults to ataxic and neuropathic accidents.

3. *Treatment of Epistaxis by the Internal Administration of Ergot.*
(*British Medical Journal*.)

Dr. George St. George, of Lisbon, observes that the treatment of epistaxis is often attended with great difficulty, especially in persons enfeebled by age. He has found ergot of use in cases where liquor ferri perchloridi, plugging, and other remedies had been tried without avail. The following is one of the cases he records. A weak anæmic woman, aged 55, had been suffering for three days from repeated and violent attacks of hemorrhage from the nose, which had increased in both frequency and violence during the last twenty-four hours. The nostrils were first plugged with lint and cold water. Dr. St. George then tried plugging with lint dipped in liquor ferri perchloridi, but without avail, as the hemorrhage continued. He then ordered her a mixture, each dose to contain fifteen minims, of liquid extract of ergot every quarter of an hour until the hemorrhage ceased, and then to be continued every four hours for a day or two. In an hour and a half the bleeding had entirely ceased and never returned. He gives the details of two other cases successfully treated by the same means.

4. *Action of Jaborandin, or Chlorhydrate of Pilocarpine.* (Centralblatt, f. d. Chirurgie, No. 52, 1875.)

The alkaloid obtained from the summits jaborandi (*pilocarpus pinatus*), termed jaborandin, or, better, pilocarpine, has a more uniform action than the leaves themselves, and, according to Siredey, acts somewhat differently from them. The doses recommended by Dr. Dumas in his thesis are from half a grain to two grains, from which no injurious influ-

ence need be anticipated. The action on the salivary glands is the most marked, and commenced very soon after its administration, so that in the course of five hours a rapidly increasing, and then slowly diminishing, salivation took place, especially from the submaxillary glands. The total excretion of saliva in this period amounted to 755 grammes (11,657 grains, more than 1½ lbs. avoir.). Copious sweating occurred one hour after the commencement of the salivation, which slowly diminished in the course of four hours. Biliary vomiting usually occurred, the urinary secretion was greatly diminished, the pulse was slowed, the temperature lowered, the pupil dilated. No therapeutic value has as yet been assigned to it.

5. *Therapeutic Value of Picrotoxine.* (*Gazette Médicale de Paris*, No. 51, 1875.)

According to recent researches, *picrotoxine* exerts a special action on the medulla spinalis and oblongata. M. Gubler has hence been led to employ it in a case of labio-glosso-pharyngeal disease, and obtained well-marked improvement after a few days. The patient, in fact, who, on admission, was only able to take liquid food, consumed the usual diet of the hospital; the salivation had disappeared, and speech had become more easy. *Picrotoxine* has been administered in doses of one milligramme (.01544 grain). At the point where the injections were made, small, hard, indolent tubercles, resembling syphilitic gummata, appeared, which slowly disappeared. This hyperplastic action of *picrotoxine* on the cellular tissue is, as M. Gubler observes, interesting to notice. M. Dujardin-Beaumetz has tried the effect of *picrotoxine* in epilepsy, beginning with smaller doses than the above, and attaining ultimately three milligrammes per diem. Here, too, prompt amelioration took place in the symptoms. The fits, which in the first instance occurred every day, only took place every second day, then became more and more rare, till they ultimately disappeared altogether. The patient quitted the hospital after two months, and had not again been seen, though he promised to return should the fits recur. This result does not, of course, demonstrate that the epilepsy was cured, but simply that an attack had been staved off for two months; but it suggests that further trials should be made with it. No results have been obtained from the employment of *picrotoxine* in *paralysis agitans*.

6. *Electricity, its Therapeutic Applications.* (*The Practitioner*, 1876.)

The electric force in all forms is a disturbing element, and is therefore unsuited to the conditions in which *rest* is the indication.

It may be assumed that this agent is inapplicable in all cases of recent or acute inflammation. After the sub-sidence of the acute symptoms, however, this agent may be beneficial. The same is true of friction and vibration. The appreciation of this principle will save some disappointments from the misapplication of the remedy.

Headache from acute inflammation or acute congestion will, according to this principle, be aggravated by electricity. A headache from inani-

tion or anæmia will be benefited, and sometimes instantly removed by electricity. A sympathetic headache will be removed by this agent when the sympathetic cause is removed.

A dyspeptic headache will generally prove intractable, because the gastric derangement will defy removal by this agency.

On the other hand, a headache dependent upon defective innervation in the sympathetic or ganglionic system, will disappear by the electric stimulation of the sympathetic ganglia. In this case it is not necessary to include the brain within the scope of the current.

In the chest "a stitch in the side," or any form of neuralgia is generally benefited, while a true pleurisy is made worse. In doubtful cases, therefore, the behavior of the agent may be made a means of diagnosis.

In the abdomen, constipation from sluggish muscular action and deficient intestinal secretion is benefited by this agent, while the same symptoms resulting from inflammatory action are only made more intense. The intestinal muscles paralyzed by inflammatory congestion are still more congested by the electric stimulus.

In the loins, the condition of lumbago is favorable for the beneficial action of this agent, while a deep-seated inflammation is unfavorable.

In the pelvis, especially in the female, the organs are benefited or injured, according as we comply with this principle, or neglect or misunderstand it.

A congestion dependent upon local muscular passiveness in the walls of the vessels ought to be benefited, while a true acute or recent inflammation will be aggravated. The practical appreciation of this agent should, upon this basis, be an aid to diagnosis.

Sciatica follows the rule of lumbago, while an inflammation of a nerve presents a condition unfavorable for the application of electricity.

An exception may be made in the apparent effects of a powerful galvanic current, which is capable of producing a numbing effect, even in an inflammatory condition. In this case, the apparent benefit is temporary, the pain soon becoming as bad as before.

7. *The Action of Cold upon Milk and its Products.* TISSERAND. (*L'Union Méd.*, No. 18.)

Fresh cows' milk, submitted to different temperatures, immediately or soon after its withdrawal, presents the following peculiarities, if kept for 24 or 36 hours at the initial temperature (between 0° and 36° C.):

1. The rise of the cream is rapid in proportion as the temperature to which it is exposed approaches the zero point (C.)
2. The volume of cream obtained is greater, according as the milk is subjected to a lower temperature.
3. The butter yielded is more considerable, according as the temperature is reduced.
4. Finally, skim milk, butter and cheese are of better quality in the latter case.

Pasteur's experiments on the origin, alterations and favorable or unfavorable media of ferment, have an application here. It is probable that the energetic cooling arrests the evolution of the living organisms which constitute ferment, and prevents the alterations due to their presence. This treatment of milk produces effects analogous to those observed in the manufacture and preservation of ices and Vienna Beer, which is so remarkable for its quality.

These facts, at any rate, prove how erroneous are the commonly received ideas upon this subject, viz., that milk intended to furnish cream should be kept at a temperature of 12° or 18° C., and not lower.

IV. DERMATOLOGY AND SYPHILIS.

1. *Cerebral Syphilis, with Coma.* MERCIER. (*Archives Génér. de Méd.*, May, 1876.)

A large, well-formed man, 33 years old, with little facial color, closed eyes, no edema of limbs nor emaciation, had 28 respirations to the minute, no cough and a stertorous respiration, due to mucus in the nasal and laryngeal fossæ, completely masking the vesicular murmur. Pulse, 62. Heart-sounds normal. Temp., 37.9° C.

The tongue was moist; belly supple and painless on pressure; urine neither albuminous nor saccharine; scanty, yellowish, diarrhoeic, stools—bladder and rectum contents voided without consciousness.

The patient could be roused from this comatose condition only with difficulty. He could then understand questions and occasionally answered them in a few words. He complained of supra-orbital headache. He could not see those surrounding him. His pupils were dilated with slight irregularity, and feebly contracted under the influence of a strong light. The eyes were expressionless. He continually ground his teeth and could scarcely protrude the tongue, but swallowed the soup put into his mouth, some portion returning by the nose. There was also occasional pharyngeal cough with mucous expectoration. There was no paralysis, but no voluntary movement. There was some appreciation of pain, but he seemed indifferent to cold, heat and tickling.

Two small eschars surrounded by an erythematous patch were visible on the buttocks.

There was no delirium, hallucination, contracture, nor convulsion.

Previous health had been excellent, prior to six weeks before examination (date of onset), without scrofulous or rheumatic antecedents. Since the inauguration of the illness his principal symptoms had been: heaviness of the head, loss of power in the limbs, and diminution of visual sense. Cusco, with the ophthalmoscope, had recognized atrophy of the papillæ. Soon after, the coma supervened; and M. discovered three large rounded cicatrices—superficial, covered with small violaceous crusts—

highly characteristic of syphilis—upon the legs. There was also adenopathy of the neck and groin.

Recovery was complete—even to the restoration of vision—after the prolonged use of calomel and the iodide of potassium. While the improvement was in progress and his lesions of the skin disappearing, he stated that three years before he had suffered from genital chancre, followed in due course by roseola and mucous patches of the mouth, throat and anus. He had also had osteoscopic pains.

2. *Cerebral Syphilis.* WOOD. (*Phil. Med. Times*, Feb. 19, 1876.)

Non-specific basal meningitis and basal cerebral tumors are very rare in non-tuberculous adults. Upon this is dependent the fact that slowly developed paralyses of the motor nerves of the eye and its muscles are so generally dependent upon syphilis. Paralysis of the portio dura of the 7th pair, does not have a similar significance for several reasons. The nerve arises so far back and proceeds so immediately outwards to enter the internal auditory meatus, that it is not usually seriously compromised by a basal exudation, and therefore escapes in syphilitic meningitis. On the other hand, owing to its long passage through the bony canal, and to its extremely superficial and exposed point of exit, the facial nerve is excessively apt to be paralyzed by rheumatic or other inflammations and exudations. Hence facial palsy may be said, on the whole, to be anti-syphilitic in its expression. It must, however, be borne in mind, that specific palsy of the nerve may occur. I have seen unquestionable cases of it.

3. *Syphilitic Phthisis.* FOURNIER. (*Gazette Hebdom.*, Dec. 17, 1875.)

The author formulates his conclusions as follows:

1. Tertiary syphilis can produce in the lungs, lesions which either locally or by reacting on the general health, simulate pulmonary phthisis.
2. These pulmonary lesions of syphilis are often amenable to specific treatment; however grave and important they may appear, they are far from being beyond the resources of art.
3. Consequently, when a case of pulmonary lesion presents itself, it is important, unless the existence of tuberculosis be quite certain, to ascertain if the lesion can be traced to syphilis. It is necessary always to bear in mind that syphilis is a possible cause of pulmonary lesions.
4. When syphilis can be suspected to be the cause, the primary indication is to prescribe specific treatment, which, in similar cases, has sometimes been followed by the happiest results.

Differential diagnosis:—The syphilitic lesion is unilateral, circumscribed, and without predilection for the pulmonary apices. It generally affects a portion of the lung not more than a few centimetres square, constituting a little islet of disease, surrounded by healthy lung tissue. When the morbid changes are far advanced in this circumscribed spot, the diagnosis of syphilis is pretty safe. The coexistence of a fair degree of *embonpoint* and general health, with advanced pulmonary changes, points to syphilis as the cause; so also does a slow development of the

pulmonary lesion, the general condition remaining good. A close examination of the entire body for ordinary symptoms of tuberculosis or syphilis, is of course necessary. Pulmonary syphilis is not transmissible by heredity.

4. *Precocious Malignant Syphilides.* ORY. (*Review of the Lyon Méd.*, Feb. 27, 1876.)

The author discusses three causes of precocity and malignity:—force of the virus, seat of initial lesion, and condition of the contaminated organism. The thirty cases observed occurred—20 in men and 10 in women.

The author is disposed to believe that malignant syphilis is more rare in women. In fifteen cases there was chronic alcoholism; in thirteen, scrofula, mental disturbances, poverty or the feebleness of convalescence from grave disease and debauchery. These causes were sometimes associated. In some of the cases of alcoholism, the patients, though young and of a healthy aspect, had grave symptoms. Scrofula was only distinctly potent in two cases, where the latter disease was well marked. (Ricord used to say that there was a "scrofulate of pox."—ED.) The influence of poverty, mental depression, dissipation, lactation and pregnancy is evident in the following conclusion:—"That which enfeebles the organism is the cause or a cause of malignant syphilis."

The author differs from Van Swieten and other writers, in believing that extra-genital chancres are not followed by grave forms of disease, but twelve of his cases had malignant syphilis, of which four had chancres of the lip, three of the arm, and one of the chin.

Ory does not believe that the gravity of syphilis depends upon the power of the syphilitic virus. The reviewer combats this idea, and cites Dubuc and others to show that the gravity of syphilis often is due to the disease itself alone. He also criticises the author in his omitting to mention the age of the patient and the phagedenic phases of chancre as determining causes of gravity. The utility of a mercurial treatment even in these forms of syphilis is dwelt upon.

(Neither the author nor his reviewer mentions a cause of malignancy in syphilis which has been forcibly and clearly demonstrated by Fournier, viz., *unrecognized and therefore untreated chancre*. Given a case of syphilis, which under early and persistent treatment results in trifling developments upon the mucous and cutaneous surfaces, can it be doubted that in the absence of all treatment, either from non-recognition of the disease or from other causes (homœopathic folly, a long sea voyage, frontier life, etc.), the malady would certainly develop precociously and very probably become malignant.—ED.)

5. *The Influence of Erysipelas on Syphilis.* DR. A. DEAHNA. (*Viertel-jahresschr. of Derm. and Syph.* III, 1.)

French writers (Ricord, Sabatier, Rayer, *et al.*) have repeatedly mentioned the salutary influence of acute febrile diseases, and especially ery-

sipelas, upon syphilis. In confirmation of this, Dr. D. reports the following observations made at the surgical clinic in Freiburg, Germany:

In Nov., 1873, a laborer, aged 27 years, was admitted to the hospital with a papular syphilide, which pretty uniformly extended over the face, the trunk and the extremities. There was also an induration of the prepuce and a general enlargement of the sympathetic glands. At the same time, the patient suffered from a chronic inflammation of the left elbow-joint with fistulous openings, the left arm being ankylosed in a nearly straight position. When the patient had received four hypodermic injections of sublimate (one-sixth of a grain each) he was given chloroform and his ankylosed arm was bent to a right angle and dressed with a plaster-of-paris bandage. Erysipelas being epidemic in the hospital at that time, the patient was affected by it the day after the operation. Starting from the affected elbow it rapidly extended over the whole arm, the shoulder, the breast and the back. The erysipelas lasted two weeks, and after the first week the induration of the prepuce and the syphilitic eruption of the skin had disappeared entirely. And the patient remained free from any syphilitic symptom until the seventeenth of January, 1875, when a roseola appeared sparsely over the body, avoiding, however, those portions which had been the seat of the erysipelas. From February 4th to 10th he had another attack of erysipelas affecting the left arm. On the third day of its appearance the syphilitic roseola had disappeared, and the patient has never since had any sign of the malady. In March, the diseased elbow was excised and the wound healed as readily as in any non-syphilitic patient. As the mercurial treatment had been too short to be effective, the destruction of the syphilitic virus, the doctor thinks, must be attributed to the influence of the erysipelas.

6. *Effects Produced upon the Blood of Syphilitic Patients by Mercury.*

KEYES. (*N. Y. Medical Record*, Dec., 1875.)

This valuable and interesting paper gives the results of a series of experiments made by the author with the aid of the *hématimètre*, in counting the red blood corpuscles of syphilitic and other subjects. We have space only for his conclusions.

1. Average of red blood-corpuscles in one cubic mm. of blood of healthy adult male. A high average is five millions. Anæmia rarely goes below three millions, and in five instances the count reached above six millions.

2. Effect of small doses of mercury upon the blood early in syphilis. In all the cases counted, the number of the red blood-corpuscles increased under the influence of mercury, good hygiene and tonics.

3. Effect of long-continued and of small doses of mercury upon the blood in syphilis. In three cases the drug was administered respectively, eleven, six and eighteen months—the blood count was above the healthy average, and clinically they were all in excellent health.

4. Effects of mercury in excess upon the blood in syphilis. In this (the only case in which salivation had, for special reasons, been induced,) (

the count showed a loss of one million, which was attributed to the excessive use of mercury.

5. Effect of mercury combined with the iodides upon the blood in syphilis. In this list it would be fair to expect frequent exceptions to the rule of increase, because so many who need prolonged treatment, late in the disease become more or less cachectic and depreciated in general health, but in only two of the nine cases under this head did the average count fall below the standard, and this among patients who had had syphilis for a long time.

6. Effect of mercury upon the blood in syphilis in hospital cases. Of these cases one entered salivated and his count increased when he began to eat. One showed a wretched count, was debilitated by disease and hospitalism, but improved under the influence of good hygiene and tonics; and it was believed that the mercury also helped him.

7. Effect of small doses of mercury upon the blood of individuals not syphilitic. The observations showed an increase in the count, one-fifth of a grain of the potassic iodide was given in granules after each meal, and one granule was each day added after the fourth day, until there were evidences of irritative action, when the dose was reduced one-half and continued there.

The following are the author's deductions:

1. Mercury decreases the number of the red cells when given in excess, especially in hospital patients.
2. Syphilis diminishes the number of the red cells below the healthy standard.
3. Mercury in small doses, continued for a short or long period in syphilis, given alone or with iodide of potassium, increases the number of red blood-corpuscles and maintains a high standard of the same.
4. Mercury in small doses acts as a tonic upon healthy animals, increasing their weight. In larger doses it is debilitating or fatal.
5. Mercury in small doses is tonic (for a time at least) for individuals in fair health not syphilitic. In such, the number of red corpuscles is increased.

V. PATHOLOGY AND HISTOLOGY.

1. *Amyloid Degeneration of the Muscular Structure of the Heart.* PROF. HESCHL. (Wiener Med. Wochenschr., 1876. No. 2.)

Some time ago Prof. Heschl, of Vienna, recommended Leonard's violet ink as a very delicate test for the amyloid degeneration of tissues (see CHICAGO MEDICAL JOURNAL AND EXAMINER, December, 1875.) And now he can give another proof of the superior delicacy of this new test. Though often suspecting an amyloid state of the heart's muscle he had never been able by the ordinary tests to verify his suspicion; while now with the aid of the violet ink, Dr. Breus has detected the amyloid degeneration of the heart in a case of caries of the spine with amyloid degeneration of the liver, spleen and kidneys. Smaller and larger arteries, sometimes the capillaries too, and the connective tissue surrounding them, gave the characteristic reaction. As to the muscular fibres the primitive bundles themselves are unaltered, but they are enveloped by a homogeneous substance giving the characteristic reaction of amyloid matter. As the bundles of the heart muscle have no sarcolemma, the above described amyloid substance surrounding the muscular fibrillæ must be a new formation and most likely of an exudative origin, because of the want of texture.

Book Reviews.

[NOTE.—All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL AND EXAMINER may be found in the extensive stock of W. B. KEEN, COOKE & CO., whose catalogue of Medical Books will be sent to any address upon request.]

HOSPITAL PLANS. Five Essays relating to the Construction, Organization and Management of Hospitals, contributed by their authors for the use of the Johns Hopkins Hospital, of Baltimore. New York, 1875. William Wood & Co.

This is one of the most valuable books of the current season. It has its origin in the munificence of the late Johns Hopkins, of Baltimore, who bequeathed a sum of money, now amounting to three millions of dollars, for the establishment and maintenance of a hospital, an orphan asylum, a training school for nurses, and a medical college, in the city of Baltimore. Placing this great sum in the hands of twelve trustees, he instructed them, in order to "provide for a hospital, which shall, in construction and arrangement, compare favorably with any other" similar institution in the world, "to obtain the advice and assistance of those, at home and abroad, who have achieved the greatest success in the construction and management of hospitals." The trustees, accordingly, authorized their Building Committee "to confer with five distinguished physicians, * * * who have made hospitals their special study, and obtain from them such advice as they may need, and to compensate them for it." The five gentlemen thus signalized are Norton Folsom, M.D., Superintendent of the Massachusetts General Hospital, Prof. Stephen Smith, M.D., well known for his studies in behalf of the Roosevelt Hospital in New York, Caspar Morris, M.D., patron saint of the Episcopal Hospital in Philadelphia, Asst. Surgeon John S. Billings, of the Surgeon General's staff in Washington, and Joseph Jones, M.D., the celebrated Professor of Chemistry and Clinical Medicine, in the Medical Depart-

ment of the University of Louisiana. Work thus inaugurated could not fail to be well done, and in this volume we have the five essays thus evoked.

These essays are read in Chicago with peculiar interest, because they contain in full, information concerning those questions of hospital construction which were recently investigated by a committee of the Medical Board of the Cook County Hospital—questions to which the answers thus elicited are now being embodied in our new County Hospital which is so rapidly approaching its completion. This committee, consisting of a physician, a surgeon and an architect, visited the cities of the East; inspected their hospitals; and there conferred with the authors of this book, as well as with other gentlemen who have made a special study of hospital construction. We flatter ourselves, consequently, that in this new Chicago hospital may be found all the excellences of older hospitals, with an absence of their defects.

In the report under consideration we learn that the site of the Johns Hopkins Hospital covers about fourteen acres. The Chicago site embraces nearly thirteen acres, but here the parallelism ends, for the Baltimore hospital will stand on elevated ground with an undulating surface, while our buildings are erected upon the flat prairie where it is only nine feet above the level of the lake. The essayists in this volume have, with the exception of Dr. Smith, touched lightly upon the subject of hospital location. Dr. S., however, presenting the results of Pettenkofer's studies concerning *ground air* and *ground water*, leaves little to be desired in this particular. He insists upon the importance of the most thorough drainage, to remove ground water, and to keep what cannot be removed at a uniform level, quoting the statement of Dr. Carpenter that when water rises in the soil, "typhoid and its allied diseases become prevalent, but as the water line falls * * *, ague, neuralgia, rheumatic disorders are rife." The use of porous tile-drains

is recommended, to favor a more perfect withdrawal not only of water but of air from the soil, it being argued that the earth is generally charged with carbonic acid and other noxious gases. The ground air is also liable to become charged with the products of putrefaction when the yards are not properly policed; and it is also the great reservoir of such malarial germs as may be produced in the earth under the influence of heat and moisture—hence it can not be too carefully excluded from all buildings. Acting upon this conviction our new hospital is brought into the most intimate connection with the system of sewerage for the city, and the air which is supplied to the buildings is not allowed to enter at the level of the earth, but is drawn in at the top of towers fifteen feet high.

Having disposed of the question of location, our authors consider the character of the buildings best adapted for a hospital. All are unanimous in recommendation of a system of detached buildings, grouped around the kitchen, laundry, engine-house and mortuary, and connected by a covered way or corridor. There seems to be little difference of opinion regarding the general mode of construction of these important offices, and of the executive building. Dr. Folsom presents for a mortuary and for a surgical amphitheatre the most elaborate plans—which are in fact the plans of the Massachusetts General Hospital amphitheatre and mortuary, and which have been, with slight modification, adopted in the construction of the new Cook County Hospital. But, regarding the construction of the hospital-ward buildings, great difference of opinion appears among the essayists. The question of temporary versus permanent edifices is fully discussed, and is unanimously decided in favor of substantial structures of brick and stone. The notion of erecting a system of wooden huts for the reception of the sick of a great civic population has here received its quietus. In fact, one need only visit such an institution as the Cook County Alms House, where the poor and the

sick are lodged in temporary wooden barracks, to see what would be the practical result if such a proposition were carried into effect.

Permanent edifices being the unanimous choice of the essayists, they proceed to discuss the question whether hospital wards should be aggregated in buildings of several stories, or whether they should be segregated in structures of only one story. Prof. Smith pronounces decidedly in favor of a single ward in each building. Prof. Jones obscures his opinion with a cloud of words. Dr. Folsom does not deny that patients get well in buildings of many stories, but is in favor of solitary wards. Dr. Billings believes that by a proper arrangement of stairways—an arrangement which has been introduced in our Chicago hospital—wards can be so isolated that buildings of several stories may be as healthful as buildings of only one story. To Doctor Morris, however, belongs the credit of having discussed this whole subject in the most enlightened and conclusive manner. He sums up the whole argument as follows:

“The experience not only of private dwellings but of public institutions, in which many persons are brought under one roof, is very strongly in favor of the superposition of one story upon another. Not only are the upper rooms more light, and cheerful, and airy, but they are also more healthy. Army experience confirms this also. In buildings provided for troops, even in miasmatic districts, those men who occupy the upper floors are less subject to disease than those on ground floors, which would not be the case if that malarious influence ascended; and travelers are aware that in foreign cities the upper floors of hotels are appropriated to the best apartments, those on the two lower floors being considered less healthy than those above. It is a well established fact that prisoners confined in upper stories enjoy better health than those on ground floor apartments.” p. 184. The Medical Board of our own

hospital arrived at the same conclusion after a careful consideration of all the circumstances connected with hospital construction in our bleak northern climate. Isolated wards may be well enough in the South, where Spanish moss drapes the live-oak with funereal gloom, or under the palm-trees and broad-leaved bananas of the tropics; but upon an open prairie, under the leaden skies of the chilly North, a "pavilion" of one story is a thing to be inspected, admired, and—carefully avoided.

A full discussion of the subject of heating and ventilation proves the truth of this conclusion. The arguments for single wards are as follows: higher ceilings, ridge ventilation, and experience gathered during the civil war. But lofty ceilings imply greater expense for fuel. Ridge ventilation adds to that expense, and insures a cold atmosphere in the lower stratum of the ward. If ridge ventilation is abandoned, and a proper system of aspiration by means of a central shaft is introduced, the ward will be warm and well ventilated, but every argument against the superposition of another ward will be removed. As for the experience during the civil war—results obtained from the treatment of vigorously constituted young men, in a temperate climate, in hospitals furnished and administered with a munificence such as the world had never before witnessed, when contrasted with the results of treatment of the dregs of civic populations, in buildings inherited from the "ages of faith," under conditions of administration of the most restricted character, can never be logically used to bolster up an argument in favor of the superiority of single story buildings. The only thing proved by such experience is the superiority of good construction and management when compared with bad arrangement, poor nursing, and scanty diet.

A great deal of space is occupied by the essayists with a consideration of the best method for heating and ventilation—these two functions being inseparably connected during the cold months of the year. All

agree that no system of artificial ventilation can equal that obtained in summer through open windows, but that is out of the question in winter. Introduction of pure air, heated by contact with steam coils below the ward, through openings in the floor, and its discharge through the ceiling, is considered the most effectual method; but its cost is enormous. It can only be employed when expense is to be left out of consideration. A room can be thoroughly warmed and very well ventilated, at half the cost of the previous mode, by introduction of warm air near or through the ceiling, and by its withdrawal through openings in the floor which communicate by a system of radiating ducts under the floor, with a central shaft in which the air is warmed and propelled upward by the heat of an iron smoke-stack. In this way a complete aspiration of the entire ward may be provided for. The wards of our new County Hospital are thus heated and ventilated. A register under each bed withdraws the air, and sucks down a fresh supply from the upper part of the room. In each corner is an open fire-place. A space of three or four feet between the floor and the ceiling of the ward below gives ample room for the arrangement of the numerous air-ducts, and this space is itself, by an ingenious contrivance, connected with the central aspirating shaft, so that stagnation of air anywhere about the building seems to be an utter impossibility.

The location of the heating apparatus is still an open question. The use of hot water seems to be impracticable in this latitude, and the authors generally concur in recommending the use of steam coils in the basement of each building. Dr. Billings expresses himself in favor of "giving to each pavilion (building) its own heating and ventilating apparatus." This has been done in the buildings thus far erected for the Cook County Hospital; but it is doubtful whether the advantages claimed for the introduction of two huge boilers directly under the floor of a ward will not be more than neutralized by the noise,

by the dirt and by the coal-dust which will fill the basement, and will find its way into the coil-chambers from which it will be drawn up through the air-ducts into the wards. It is also a question whether the basement of each building will not be needed for purposes of storage, to the exclusion of heating apparatus, which may then be concentrated in the central engine-house. It is in the basement, too, that the location of dungeons for the confinement of maniacs and drunkards is recommended.

Much more might be written concerning the minor details of construction, upon which our authors dwell, but our space will not allow anything beyond an allusion to the salient points of this interesting volume. Dr. Folsom's essay is especially rich in suggestions respecting such usually "unconsidered trifles" as the best method of constructing a window or a transom. He seems to have omitted nothing, and in the minutest particular shows himself a thoroughly finished master of hospital construction and administration. With regard to the management of such an institution all are agreed that the superintendent, though not to be charged in any way with the care of the patients, should have the education of a physician. Every physician is by no means qualified to superintend a hospital. That requires a rare assemblage of gifts, both natural and acquired. But no man is competent to intelligently superintend the administration of such a great machine who is not thoroughly educated, and practically acquainted with the facts of anatomy, physiology, and therapeutics, as well as with physics and chemistry; for no other education can enable one to fully appreciate the vital necessity for the greatest possible perfection in all arrangements and appliances for the care of the sick. And since such men can not easily be induced to take a position from which they are liable to be, at any moment, displaced at the will of a continually changing body of superior officials, it is all important that some greater degree of stability than is at present customary, should be incorporated into the management of public charitable institutions.

With this brief and imperfect notice we must commend to our readers one of the most interesting and instructive volumes that has recently attracted our attention.

H. M. L.

PRINCIPLES OF HUMAN PHYSIOLOGY. By *Wm. B. Carpenter, M.D., F.R.S., F.G.S., F.L.S., etc.* Edited by *Henry Power, M.B., etc.* Eighth edition. Philadelphia: Lindsay & Bla-kiston. 1876.

A glance at the index of this work, its comprehensive list of subjects and authors, would lead us to anticipate what a study of the text proves true, that the author has condensed into one volume the material for at least three. Indeed, it covers even more ground than is occupied by Flint's five volumes. Hence our first criticisms: The necessary abridgment of subjects and the unwieldy shape of the book. As a compendium of physiology in the relations of the science to histology and pathology, it certainly brings the subject, as a whole, up to the level of the latest research. This is especially true of the nervous system, and still more especially of the encephalon, both as regards its anatomy by Meynert and its functions—particularly the function of the peripheral layer of cortical substance of the hemispheres—the arguments as to the existence of motor centres in the same put forth by Ferrier, Hitzig, Hermann, Sanderson, and others; also the function of the sensory ganglia—the common seat for sensational and mental consciousness.

The function of the cord is not so well defined. It has long been considered on good authority, that cerebral memory is but a higher degree of spinal, while the researches of Dr. Hammond (whose authority on the nervous system is scarcely quoted by this author) seem fully to justify his conclusions, viz: That perception and volition are seated in the spinal cord, as well as in the cerebral ganglia; that the cord is not probably capable of *originating* mental influence independently of sensorial impressions—a condition of the brain also, till it has accumulated facts through the operation of the

senses ; that as memory is not an attribute of the mental influence evolved by the spinal cord, it requires, unlike the brain, a new impression, in order that mental force may be produced.

Thus more and more are we departing from the old idea that the brain is the principal nerve-centre of the system, and approaching to the new idea that gives to the cord the first position. Of course we refer to the physiological rather than the anatomical cord—the track of gray globules which extends beyond the spinal canal even to the sella turcica. The physiological experiments of Legallois should have found a place in this particular subject. Altogether, there is not enough said as to the cumulative or storing-up power of the nerve globule—wherever that organ, for we must consider it such, may be found.

The mechanism of respiration is not as well explained as it might be, nor is the idea made sufficiently prominent that the essence of the function is in the tissues themselves. The preface acknowledges that due consideration is not given to the influence of respiration upon the circulation—that point is clearly developed when the true mechanism is made plain. The function of the liver is recognized as double, viz., glycogenic and biliary, but we find nothing concerning that complicated point in the anatomy of the liver as to whether the structure is not also a double one—a question which arises from the study of embryonic development, the biliary gland being a development from the intestinal tube, while the glycogenic is an outgrowth from the omphalo-mesenteric or portal vein, thus making the two parts of the liver arise from separate germinal plates.

No reference is made to the function of the bile, so elaborately stated by Küss; viz., the desquamation and removal of the intestinal epithelium, and thus, by simply keeping the absorbents in order, *favoring* the absorption of fat, but not otherwise concerned in that work, though the absorption of fat has been considered the special

rôle of the bile. The new theory seems reasonable, from the fact that the bile is not poured into the duodenum till some seven or eight hours after the ingestion of food, hence can have little or no part in digestion and absorption, as such.

The author treats of the kidneys as glandular organs and of the urine as a secretion of the same; whereas the purely mechanical pressure of the blood, the structure of the Malpighian corpuscles and the pathology of Bright's disease, to say nothing of the recent physiological experiments in this direction and the evidences from comparative anatomy, are very strong proofs that the kidneys are not glands in the strict physiological sense, but simply filters; that urea, in fact, no solid constituent of the urine, is secreted by peculiar gland cells in the kidney, but merely given up by drainage and passes out of the body as excrementitious matter, while the albumen so essential to nutrition is reabsorbed into the blood by the epithelium of the uriniferous tubuli, hence when the epithelium is diseased its function fails, and the albumen is left in the tubes to pass off in the urine. This to us is the most reasonable of all theories concerning the function of the kidneys—the only one that can account for all the phenomena.

The function of Peyer's patches is left quite obscure, although now apparently so well established—these organs being considered important centres of the lymphatic system, for the manufacture of white corpuscles; while the author gives an ambiguous assent to the formation of lymph corpuscles from the plasma—a modification of the spontaneous generative doctrine, recently revived by Onimus. We are surprised to see credence given to the exploded theory of Pavy, that the alkalinity of the blood protects the stomach from being digested by the gastric juice. We may well inquire, what then protects the intestine? There are many more plausible theories, such as "catalysis," the "active processes of nutrition" accepted by Flint, the coating of the stomach

formed by mucus or desquamated epithelium during digestion, quoted by some authors, as Youmans in his last chemistry, but by far the most intelligent theory is the vital rôle of the epithelium of the part—of which a striking example is afforded by the epithelium of the urinary bladder.

The doubtful expression “coagulable lymph,” is used, and the statement is made that the contractility of protoplasm is due to nervous influence. Whereas we all know contractility to be an inherent quality of protoplasm, which is manifest to a marked degree without the shadow of a nervous influence, unless we assume what it seems to us is true, that nervous force is only a part of the general force that characterizes living matter, that it is always active, but not recognized as such until it is set apart or differentiated from the common store and allowed to work through its own special organs.

We are glad to see the lymphoid organs, which include, as well, the so-called blood-vascular glands, have received so much consideration. Some of this ground has come to be no longer debatable, and yet most authors pass it over in silence. For example, Dalton's last work makes no mention of the spleen. It shows the true scientific spirit to attack the suprarenal capsules, the pituitary body, coccygeal gland and every atom that dares to find its way into the human body, put it into the witness box and make it speak for itself. We may be sure it will never bear false witness, the fault is in our interpretation. The only name we miss from this goodly company is that of the tonsils—physiology looks upon them no longer as sinecures.

The plates for the most part are very excellent, especially those of the nervous, absorbent and muscular systems, and those of the development of the embryo, though we do not accept some of the points of development, as for instance, that of the ovary. We look upon the epithelial element of the vesicles as an offshoot from the peritoneal epithelium, made by a dipping down into the

stroma, of the investing peritoneal layer, these pouches finally becoming the closed and isolated vesicles.

Physiology is so far from being exact, every author who adds one atom to the side of certainty should receive the gratitude of us all—hence we welcome the present volume and heartily recommend it, save these few faults, to all, especially to those who can afford but one book on the subject.

S. H. S.

L'HYGIÈNE DANS LA VILLE DE ROME ET DANS LA CAMPAGNE ROMAINE, par le Dr. PIETRO BALESTRA, membre des Conseils Sanitaires Provinciaux, traduit de l'Italien. Paris. 1878. pp. 267.

If the traveler in Italy does not become disagreeably acquainted with the fever that prevails near the Roman Campagna, his guide-book will tell him about it. The student of malaria, too, discovers that this locality figures largely in the statistics of miasmatic disorders in Europe. A practical work on hygiene, for the benefit of those residing near the city of Rome, would therefore be valuable in many points of view, but the writer of this treatise has, we fear, failed to understand the purpose of such a handbook. The volume before us is, in many respects, too technical for the unprofessional reader, and yet is very far short of being a compendium of information respecting malarial disease. We suspect, cannot indeed avoid the suspicion, that the chief end in view of Dr. Balestra, was to increase his professional income by the publication, for the benefit of the laity, of a work which should contain sufficient scientific facts to impress the unprofessional reader with the extent of his learning.

“In order to do away with the sad results of an intermittent fever, we must avail ourselves as early as possible of the resources of art. I therefore advise the inhabitants of Rome to select a good physician,” etc.

The author is inclined to adopt the view which would account for malaria, by the introduction into the system, of the spores of certain vegetable fungi. He quotes the

article published in the *Chicago Medical Journal* for January 1874, by Dr. Jno. Bartlett, of this city, in corroboration of his views. But the name of our honorable colleague is distorted upon one page to Barlett, and upon another to Berlett. Let us charitably conclude that in the latter case only, has the author been in error.

Translations.

MEDICINE AND THE FINE ARTS.

(From the German of Rohlf's *Geschichte der Deutschen Medicin.*)

BY JAMES I. TUCKER, A.M., M.D., CHICAGO.

All great poets have taken a lively interest in medicine. We know little of Shakspeare in this connection, but it is safe to say that he studied medicine as well as the old poets, for it is evinced by the masterly delineations in Lear, Hamlet and Macbeth. Concerning Goethe it is well known that he preferred the society of physicians, and neglected his legal studies, for a long time to such an extent that he attended only the medical college. In his autobiography he says of himself: "I gave to the study of jurisprudence only so much time and attention as was necessary to graduate with honor. Medicine fascinated me, for it enabled me to see Nature where she was not openly revealed." That Goethe's medical studies were not fruitless is shown by his discovery, later, of the intermaxillary bones and the metamorphosis of plants, which up to that time had been overlooked by anatomists and botanists. Lessing matriculated in medicine at Wittenberg, and later, was a diligent student of obstetrics at Leipzig, devoting his attention upon entering, to the history of syphilis. It is then, a fact, that great poets feel drawn towards medicine, and great physicians towards poetry, and the fine arts. Raphael

Frankenstein in his book entitled "The Poet and the Physician," has done full justice to this subject. How little great physicians have limited themselves to the study of nature and disease may be learned from the answer of Sydenham. Being asked what book the physician should read, he replied, "Don Quixote." It has been said that Raphael in his celebrated painting of the Faculty, utterly ignored the physicians. Marx was the first to remove this reproach. "But what," said he, (*Beitrage S. 178*) "if it should appear that only a superficial glance at the picture, and not the picture itself, should bear the burden of the ill humor and the sickly subserviency to rank? That another explanation should reveal that the physician, instead of being neglected and insulted by it, receives only praise and honor?"

Let us look at the painting of the poets and muses, with Apollo playing upon a sweet instrument, all together in the laurel grove, and wearing the expression of the profoundest ease and contentment, those who are listening to the music, as well as those who are entertaining themselves with conversation, exhibiting no trace of excitement or passion, then we can only believe that they are thinking of purity, goodness, truth, and value only the quieter virtues.

What could more appropriately represent the physician who with his whole soul devotes his knowledge and power to human woe, rendering to every one who needs it, self-abnegation, relief and all the blessings of the healing art.

Consequently in Art, as Raphael presented his higher conceptions for the benefit of mankind, so the medical profession becomes an imperishable glorification. To be permitted to behold in the picture of Parnassus the sentiment of the art of medicine must, therefore, inspire in every disciple the feeling of joy and pride.

MEDICINE AND POETRY.

(Translated from Rohlf's *Geschichte der Deutschen Medicin.* Stuttgart, 1875.)

BY JAMES I. TUCKER, M.A., M.D., CHICAGO.

Medicine and poetry are the oldest of the arts. Poetry is the language of the childhood of a people, because the language of feeling, and its development precedes that of the understanding. The language of understanding is prose. We may study the history of every nation, search after the most ancient traditions of Greece and the Indus, of the Scandinavians and the Indians, everywhere we find that the earliest products of the mind are expressed in metrical form. Hence a people can no longer produce a great poet after it has passed the period of popular sentiment and primitiveness; thereafter the understanding rules supreme and the *blastemal* stage is begun. A truly great poet must possess a childlike feeling, for in such only can fancy take root. In relation to age is it, therefore, possible to divide the arts into those which unfold themselves during the childhood and those which develop in the maturity of a nation's existence. To the first belong poetry and medicine, to the latter sculpture and painting. Between the two, stands music. To communicate his feelings and thoughts to others; to sing the deeds of heroes, gods and demigods; to heal the wounded—these, if indeed the germs exist and materials for the realization of the idea, these naturally precede those which are to come. With poetry it was different; here, in the very beginning, a medium of communication was given, namely, language. Thus also with medicine. Nature indicated the manner in which wounds must be healed, and how in fevers attending internal disease, recovery must take place through her inherent power. And as Apollo was regarded by the Greeks as the god alike of the poet and the physician, so those who distinguished themselves by the healing of sicknesses, were held by their fellow-men to be beings endowed by superior gifts, and like Chiron the centaur and Esculapius,

to be the sons of Apollo. It is not by accident that Greek medicine attained to its high degree of perfection. The principal reason is, that its physicians comprehended *the principles of their art*. In all Grecian medicine—and Hippocrates, even, spoke of a medicine still more ancient—we find no where and at no time an effort to convert the art into a science, as it is *the persistent tendency of modern medicine to do*. To the Greeks, medicine was the *healing art*. We observe, therefore, that all physicians deservedly prominent who have followed Hippocrates, from antiquity to the present day, have held the arts in high esteem, having been interested in music, sculpture or painting, perhaps participated in them, and showed, for poetry, the art of arts, and consequently for all the humane belletristical studies, the most devoted consideration.

Medical News and Items.

DO "THEY DO THESE THINGS BETTER IN FRANCE" ? A writer in the *Soir* remarks that the wretched custom prevails in France of expecting physicians and attorneys to wait for remuneration of professional services for an indefinite period of time. "It often happens that a physician is not paid until a year has elapsed after his visits. What do they expect him to live upon while he is waiting? I recall a remark made by one of my friends on receiving, after three years, the account of his medical attendant: 'I wouldn't have thought it of him!' If the custom of other nations were introduced in France, we should no longer have presented to us the sad spectacle of a man of science, often advanced in years, aroused from sleep in the night and made to ascend and descend several flights of stairs, the payment for whose services is neglected with less scruple than would be entertained for a mere lackey."

THERE IS WAR IN CANADA, between the *Canada Medical Record*, which is supposed to represent the interests of the College of Physicians and Surgeons of Lower Canada, and *L'Union Médicale de Canada*. The subject of contention is a Medical Bill of Reform, presented by Hon. M. Chapleau in the interest of the general profession, who have ventured to operate in the matter without the advice and assistance of the honorable professors of the Medical College, and, in particular, the Editor of the *Record*. The Editor of the *Union Médicale* satirizes his editorial confrère as Jupiter Tonans. "He desires to be esteemed a Jupiter, it is true, but Minerva never sprang, full armed, from his head. The *Medical Record* thinks it monstrous that the property of the College should be transferred to another organization. We should like to know of what this property consists. What is left when you take away its archives, its charter, and its seal? Would you answer by referring to the petty sum which comes largely from the sale of licenses, useless to those who gain them? Distribute this among its members and bury the decrepit organization with an Homeric repast. All's well that ends well. The College is powerless for good or evil. The evil it does is even purely negative, for it cannot prevent the accomplishment of good. Better commit suicide under these circumstances, for then 'life becomes an opprobrium and death a duty.'"

A DANGEROUS PRESCRIPTION.—The following prescription was presented at a pharmacy: R, Acid. Chromic., grs. viij; Glycerinæ, 3j. M. et S. For external use. The clerk dissolved the acid in a vial by the aid of a little water, then added the glycerine and agitated the contents. An explosion occurred which expelled the contents of the vial, but fortunately did not burst the latter, which was left in the hand of the stupefied drug-clerk.—*Pharm. Central.*

THE following books have been donated to the library of the Chicago Medical Press Association.

From Dr. A. Reeves Jackson :

- Lewis' Dispensatory.
- Turner's Chemistry.
- Barton's Lectures on Materia Medica, 2 vols.
- Beddoes' Observations.
- Carmichael on Venereal Diseases.
- Gregory's Practice, 2 vols.
- Deweese's Practice, 2 vols.
- Package of Journals.

From Dr. R. C. Hamill :

- Medical and Surgical History of the Rebellion, 2 vols.
- Ninth Census of the United States, Circular No. 4.
- Transactions of American Medical Association, 12 vols.
- Medico-Chirurgical Review, 1827.
- Mackenzie, Diseases of the Eye.
- Patent Office Report, 1851 and 1855.

From Dr. J. M. Woodworth, U. S. M. H. S. :

- Annual Reports Marine Hospital Service, 1873 and 1874.
- Nomenclature of Disease.
- Migrants and Sailors.
- Hospitals and Hospital Construction.
- Contributions to the Study of Yellow Fever.

From State Board of Health of Michigan (Dr. Baker, Sec.):

- Michigan State Reports, Nos. 1, 2, 3, 4 and 5.
- Health Report for 1872, 1873, and 1874.

EDW. WARREN SAWYER,
Librarian.

PHOTOGRAPHY AS A MEANS OF DIAGNOSIS.—The photographic process is so acutely sensitive that it will often present vividly certain blemishes which the eye is incapable of detecting. Some years ago a lady had a photograph taken of herself in which the face appeared covered with blotches which could not be seen in the original. The next day they became evident to the naked eye and she finally died of small pox. The photograph had proceeded farther than vision, and recognized in advance, exceedingly delicate light-yellow stains.—VOGEL. *Photography & Chemistry of Light.*

THE PHYSICIAN OF THE SULTAN.—The Sultan of Turkey, grateful for the relief which he has had from a recent illness, has just presented his Medical Director General with one thousand Turkish pounds.—*Lyon Médical.*

A PHARMACIST WITH A CATHETER IN HIS HAND.—A Pharmacist of Bordeaux sent his son, a student in pharmacy, to catheterize an individual affected with retention of urine. Soon after the patient succumbed. The tribunal has just condemned this student to ten days imprisonment for the injuries inflicted in his ignorance; and a fine of forty-five francs for violation of the law respecting the practice of medicine.—*Lyon Médical.*

THE CITY OF PARIS AS A DISSECTION CENTRE.—“Even now she is the city which offers the greatest resources for dissection, for nowhere can subjects be found in greater number; as independently of those which the numerous hospitals furnish, many of the departments around Paris send the bodies of all their dead prisoners to Clamart or École Pratique. The latter is situated in the heart of the Latin Quarter, and, although its appointments are not so complete as the former, still, its proximity to the École de Médecine, and the rooms of a great number of students, causes it to be much frequented. More than a thousand cadavers are yearly required for the uses of this institution, while Clamart demands from two thousand to twenty-five hundred, as, while the former is opened only during the scholastic year, the latter is continually accessible. The charges for dissecting material are now moderate, as both establishments furnish it to the student for the sum of twenty francs (\$4.) per term.”—*Paris Correspondence Det. Med. Rev.*, April, 1876.

THE EDITOR of the *Louisville Medical News*, in referring to the fact that the University of Louisville had decided to abolish the requirement of theses from candidates for graduation, says: “We believe this is the first institution which has taken this step.” It cannot be that our friend takes the papers. Rush College, of Chicago, has not required theses for several years.

“DOUBLE-HEADED DIPLOMAS.—A correspondent from Carthage Ill., writes: ‘In your issue of Feb. 26th, you mention “a new, time-saving method of securing a diploma,” and credit those Siamese twins institutions at Louisville, Ky., with inaugurating it; but the credit (?) for this innovation belongs farther west. The College of Physicians and Surgeons of Keokuk, Iowa, has had a summer and winter course of lectures in operation for three or four years past, and grants diplomas after an attendance on the two courses, so that a student may commence attending lectures in October and graduate in the following May.’”—*N. Y. Med. Record*, March 11, 1876.

ANNOUNCEMENTS FOR THE MONTH.

MONDAYS. SOCIETIES.

Mondays, June 5 and 19—Chicago Med. Society, regular meetings at the Washingtonian Home, 8 p. m.

Mondays, June 19 and 26—Chicago Society of Physicians and Surgeons, regular meetings at Grand Pacific, 8 p. m.

CLINICS. Every Monday.

At Eye and Ear Infirmary, (Peoria and Adams Sts.) 2 p. m.—Prof. Holmes.

At Central Dispensary (239 W. Van Buren St.), 2 p. m., *Gynecological*—Dr. Adolphus; 3 p. m.

Medical—Dr. Bridge.

At Mercy Hospital, 2 p. m., *Medical*—Prof. Johnson.

TUESDAYS. SOCIETIES.

Tuesday, June 13—Academy of Sciences, regular meeting, 8 p. m. (363 Wabash Ave.).

CLINICS. Every Tuesday.

At County Hospital, 2 p. m., *Medical*—Prof. Lyman; 3 p. m., *Surgical*—Prof. Freer.

At Mercy Hospital, 2 p. m., *Medical*—Prof. Hollister.

WEDNESDAYS. CLINICS. Every Wednesday.

At County Hospital, 2 p. m., *Ophthalmological*—Dr. Montgomery; 3 p. m., *Gynecological*—Prof. Quine.

At Mercy Hospital, 2 p. m., *Surgical*—Prof. Andrews.

At Central Dispensary, 2 p. m., *Medical*—Dr. Bridge.

At St. Luke's Hospital, commencing at 1.30 p. m., *Surgical*—Dr. Owens.

THURSDAYS. CLINICS. Every Thursday.

At Central Dispensary, 2 p. m., *Diseases of Chest*—Dr. Ingals.

At Mercy Hospital, 2 p. m., *Medical*—Prof. Johnson.

FRIDAYS. SOCIETIES.

Friday, June 9—State Microscopical Society of Illinois, regular meeting at the Academy of Sciences, 8 p. m.

CLINICS. Every Friday.

At County Hospital, 2 p. m., *Medical*—Prof. Lyman; 3 p. m., *Surgical*—Prof. Freer.

At Mercy Hospital, 2 p. m., *On Diseases of Eye and Ear*—Prof. Jones.

At Central Dispensary, 2 p. m., *Gynecological*—Dr. Adolphus.

SATURDAYS. CLINICS. Every Saturday.

At Rush College, 2 p. m., *Surgical*—Prof. Gunn; 3 p. m., *Diseases of the Brain and Nervous System*—Dr. Hay.

At Chicago College, 2 p. m., *Surgical*—Prof. Andrews; 3 p. m., *Medical*—Prof. Davis.

~~At~~ All the above Clinics visiting regular practitioners are, we believe, admitted.